

The Exercise Cure

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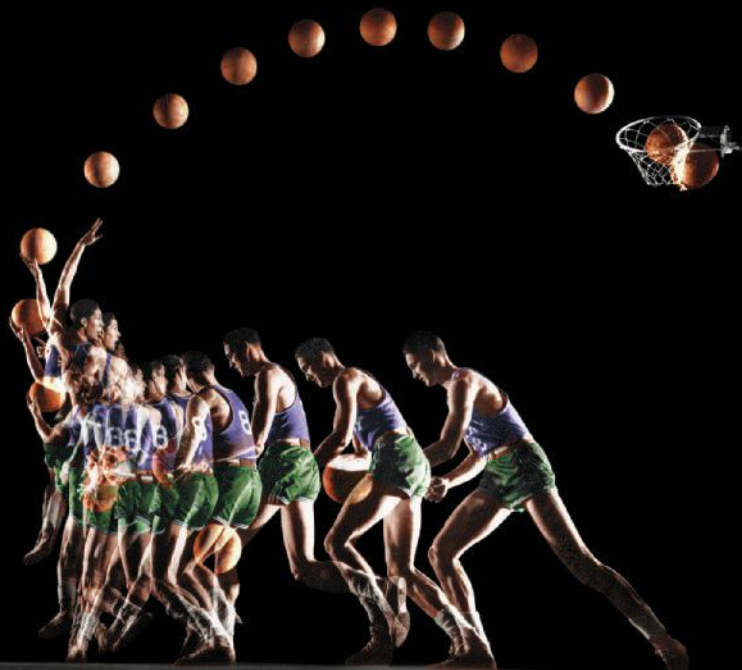
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Emerging research indicates powerful health benefits result from exercise

ON THE COVER AND ABOVE: Photograph by Gjon Mili—The LIFE Picture Collection/Getty Images; colorization by Sanna Dullaway for TIME

Putting the camera aside

HOW'S THIS FOR A BUSINESS MODEL? THE smugglers of Libya cram as many people as possible aboard ramshackle dinghies and send them off across the Mediterranean. There's virtually no chance that the boats will make the 300-mile journey to Europe; they will either sink, drowning all on board, or be intercepted by a rescue ship or naval vessel on patrol. But the outcome makes little difference to the smugglers, who are part of a more than \$5 billion industry; either way, they get paid, and new passengers keep coming.

This is the very definition of a death-defying journey, which TIME correspondent Aryn Baker and photographer Lynsey Addario set out to tell for this issue and an ongoing multimedia project. Now that the refugee route from Turkey to Greece has all but closed down, more and more migrants are braving the far more dangerous Libya-to-Italy corridor. Aryn and Lynsey embedded with a rescue team from the medical charity Médecins Sans Frontières on the MV *Aquarius*. It took their 77-ft., steel-clad, multi-engine surveying vessel 36 hours to reach Sicily from Libya. "The thought that these tiny, 40-horsepower-engine [migrant] boats, loaded with one tank of fuel, could make it anywhere would be laughable but for the number of lives at stake," Aryn says, and indeed the death toll on the route has risen sharply this year, to 2,726 people.

These refugees came not just from the nightmare war zones of Syria and Sudan but from all across Africa. As dangerous as the sea journey is, Lynsey observes, "This is the least harrowing of their months- and years-long journey to date. They have been tortured, bound, gang-raped, trafficked, humiliated, starved and thrust into the open seas, and we come upon them often as the first ally since

they left home." At one point after intercepting a sinking trawler, there were 551 people aboard the *Aquarius*; Aryn handed out emergency rations, while Lynsey deployed her rudimentary Arabic to help calm frightened passengers.

"After almost two decades of covering people at their most vulnerable, I am often asked when is the appropriate time to put my cameras down and intervene in any given situation," Lynsey says. Normally, her response is that she is not a doctor,

and her mission is to tell the story to the larger world. But as the rescuers scrambled to pull some 400 people from one sinking boat, babies, toddlers and children were thrust from the crowd, one after another, passed along a chain of rescue workers. "When I pulled my camera away from my face, I realized everyone's hands were full but mine," Lynsey says, "and there was a startled boy at my feet—no more than 3 years old. The boat was jostling

to the left and right, the sea splashing around us, and I thought of my son. I instinctively picked up the boy, letting my cameras dangle at my side, and undoubtedly missed some of the most important images of the day. But the situation was tense and precarious, and I knew what I needed to do then and there."

This was Lynsey's fourth journey on a search-and-rescue boat. She knows already it won't be her last.



BEHIND THE SCENES

Photographer Addario (above, in glasses, 25 miles off the coast of Libya) says being embedded on a search-and-rescue vessel was a "leveling" experience

Nancy Gibbs, EDITOR



ALYA WHITE—MSF; GIBBS: PETER HAPPAK FOR TIME

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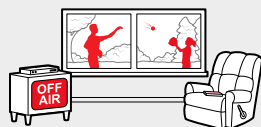
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'I'm going to continue to stand with the people that are being oppressed.'

COLIN KAEPERNICK, San Francisco 49ers quarterback, explaining his decision not to stand during the national anthem; he said he does not want to "show pride in a flag for a country that oppresses black people and people of color," citing police brutality as one of many injustices

323

The number of reindeer killed by a lightning strike in Norway



1 hour

The length of time British TV network ITV shut down several of its channels Aug. 27 to encourage viewers to exercise instead

'I'm running a business.'

HEATHER BRESCH, CEO of Mylan, explaining why the pharmaceutical company raised the price of the EpiPen, a lifesaving portable injector for those with severe allergies, from \$100 to more than \$600 each; Mylan said it would soon offer a generic version costing \$300 for a two-pack, which users noted was still significantly more than what the branded version cost a decade ago

\$6 billion

The potential size of the market for legal marijuana in California by 2020 if state voters legalize it in November, according to a report funded by pro-legalization groups



Beyoncé

The singer won eight Video Music Awards, including the top Video of the Year honor

**GOOD WEEK
BAD WEEK**

Drake

The rapper was unable to accept his VMA onstage because he was stuck in traffic

'HE HASN'T CHANGED HIS POSITION ON IMMIGRATION. HE'S CHANGED THE WORDS THAT HE IS SAYING.'

KATRINA PIERSON, Donald Trump's campaign national spokesperson, amid accusations that Trump had dramatically softened his stance on deportation of undocumented immigrants when he said he would potentially allow some exceptions

'I'M IN. LOOKING FORWARD TO A BEAUTIFUL AND BRIGHT FUTURE.'

SAMI SARWARI, student at American University of Afghanistan, in his last Facebook post before he was killed there on his second day of school; at least 13 were killed and dozens more wounded in a terrorist attack on Aug. 24

'Today begins the end of the suffering, the pain and the tragedy of war.'

JUAN MANUEL SANTOS, president of Colombia, praising an agreement between the government and FARC rebels that ended more than 50 years of fighting, the longest ongoing war in the Americas



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The Brief

'EARTH HAS ENTERED A NEW EPOCH, CALLED THE ANTHROPOCENE.' —PAGE 10



Male and female FARC fighters dance during a party in July at one of their camps in rural Colombia

LATIN AMERICA

How peace— finally—came to reign throughout the western hemisphere

By Bryan Walsh

CHURCH BELLS RANG IN THE SMALL towns of Colombia at 12:01 a.m. on Aug. 29. The tolling marked the official start of a cease-fire that was years in the making and the end of a war that had dragged on for decades. The Revolutionary Armed Forces of Colombia—a Marxist guerrilla group known as FARC—and the Colombian government had agreed to stop fighting, the first step toward the disarmament of thousands of FARC troops and the end of the longest-running war in the Americas. Since it began in 1964, the war had killed roughly 220,000 people. “Never again will parents be burying their sons and daughters killed in the war,” said Rodrigo Londoño, FARC’s leader, known in Colombia by his nom de guerre Timochenko.

But those bells weren’t ringing just for Colombia. The formal end of the conflict marks the effective end of war in the western hemisphere, home to more than a billion people. There is still plenty of violence to be found in the Americas—especially drug-related gang violence in countries like Mexico and Honduras. But traditional armed conflict—involving armies from two or more states, or between a government and an organized rebel group—has ended on one-half of the planet. At a moment when much of the world feels out of control, that’s worth celebrating.

It’s fitting that the war with FARC should be the hemisphere’s last, as it set the template for conflicts that would plague the region during the Cold War and beyond. The group was

founded by Pedro Antonio Marín, a peasant farmer who went by the moniker Sureshot, and it sought the redistribution of land to Colombia's agrarian poor. It wasn't long before the group was adopted by the Communist Party of Colombia as its armed wing, making it one of a series of far-left rebel groups that flourished in Latin America: Peru's Shining Path, Argentina's FAR, Nicaragua's Sandinistas in the 1970s and '80s. Those were the years when Latin America was the hot front of the Cold War, with the Soviet Union and the U.S. each backing their ideological allies in the jungles.

Later, FARC, like many other rebel groups in the region, branched out into crime, financing its growing operations through drug trafficking and kidnappings for ransom. At its height, FARC boasted 18,000 guerrillas and was strong enough to threaten the capital, Bogotá. But paramilitary groups and the Colombian army—which became one of the largest recipients of U.S. military aid—were able to fight back.

'Never again will parents be burying their sons and daughters killed in the war.'

TIMOCHENKO,
FARC leader

While FARC fighters will begin to hand over their weapons to U.N. observers, Colombians will need to approve the deal in a plebiscite on Oct. 2. Approval isn't guaranteed; many Colombians are angry that FARC fighters won't face harsher justice for crimes committed during the war. And reintegrating FARC guerrillas—many of whom have been living in the jungle for decades—into Colombian society won't be easy. But ask the people of Syria if they'd like a chance to vote on peace, however compromised.

Latin America today is hardly perfect, but it enjoys a level of peace and prosperity unimaginable during the years of the Cold War. Military coups are largely a thing of the past; democratic governments are increasingly the norm, and even longtime enemies like the U.S. and Cuba are growing closer. (Just two days after the FARC cease-fire began, scheduled passenger-jet service between Miami and Havana restarted for the first time in more than 50 years.) In this, Latin America is following the example of once war-torn regions like Southeast Asia that are now almost entirely free of active combat. That should give hope to people in the regions of the world—chiefly the Middle East and sub-Saharan Africa—still blighted by war. Those bells may ring for them one day. □



CIVILIANS A group of Colombians wait for a Christian Mass to begin in the village of Puerto Camelias. The area is under the effective rule of FARC and has been a major source of coca crops. But as the peace process has continued, the cultivation of coca has ended—and the population of the village has fallen rapidly.



GUERRILLA LIFE A member of FARC cuts the hair of another soldier in a camp. The group still dominates life in some parts of rural Colombia, where it has effectively displaced the government. Many of the soldiers are teenagers who have spent nearly all of their lives with FARC. Reintegrating into civilian society, should peace hold, will be a challenge.



Life in FARC Photographer Alvaro Ybarra Zavala was able to make rare visits to remote FARC camps in March and July as the guerrillas warily prepared for peace.



THE WOMEN OF FARC A FARC member puts on makeup in a jungle camp. Female soldiers are not uncommon in FARC, but the rules forbid marriage within the group, though intimate relationships are allowed.



MEMORIALS A child in the FARC-controlled community of Guama waits at the door of his house. The drawing on the pillar is of Alfonso Cano, the top commander of FARC until he was killed by the Colombian army in 2011. It wasn't until after Cano's death that peace talks between FARC and the government took off, eventually culminating in the Aug. 29 cease-fire.

GEOLOGY

The Anthropocene should bring awe—and act as a warning

AS GEOLOGICAL EPOCHS HAVE COME AND gone throughout Earth's vast history, shifts have often correlated with large-scale global changes like ice ages and mass extinctions. An asteroid hits the planet, wiping out the dinosaurs, and the Cretaceous period becomes the Tertiary. Until now, life on Earth—including us late-arriving *Homo sapiens*—was along for the ride. But on Aug. 29, some scientists at a meeting of the International Union of Geological Sciences (IUGS) in South Africa said human activity has grown so powerful that it is forcing a change of the geological calendar: Earth has entered a new epoch, called the Anthropocene, defined by humans and our effect on the planet.

For 12,000 years, we lived through an epoch known as the Holocene, which provided a stable and relatively warm climate that allowed humans to develop everything from agriculture to atomic power. But that success remade the planet we live on through widespread deforestation,

overfishing of the oceans, the extinction of countless species and the altering of the planet's climate through the emission of greenhouse gases. Most telling is the spread of radioactive material across Earth since 1950 as a result of the testing of nuclear bombs. Humans brought an end to the Holocene quickly—no other geological epoch lasted fewer than several million years.

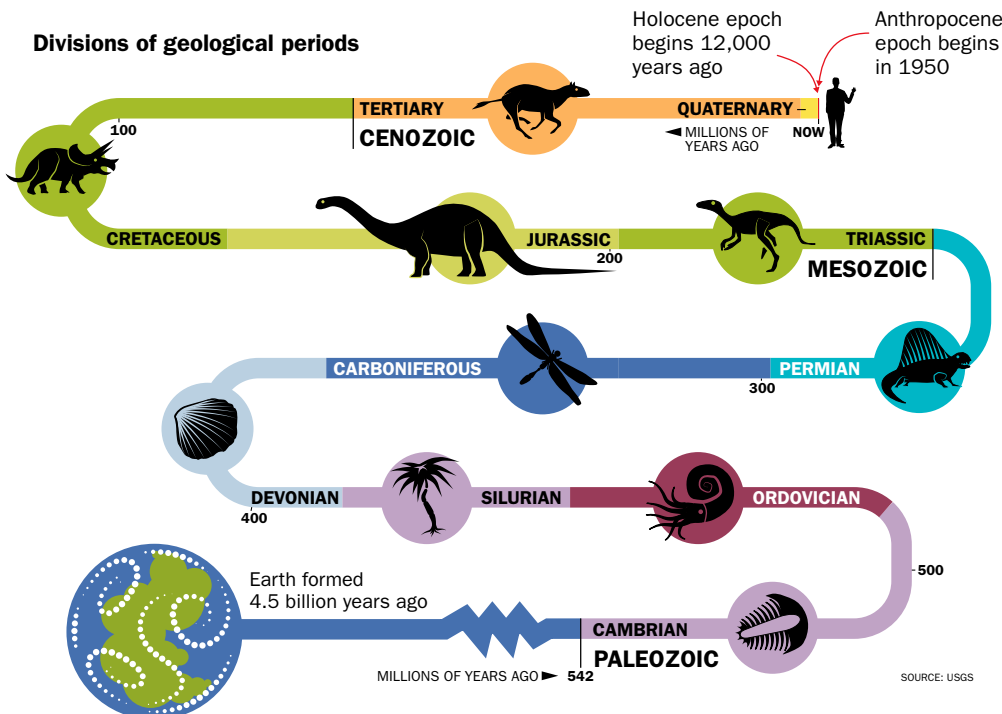
The IUGS gets the final vote on the geological calendar, and while scientists in its working group on the Anthropocene overwhelmingly recommended the new designation at the South Africa meeting, it has yet to be confirmed. But momentum has been building behind the Anthropocene for some time. Paul Crutzen, a Nobel Prize-winning chemist, first described this human-influenced era more than a decade ago with a focus on climate change. The downside of human influence should be obvious—we're not just changing

our planet but destroying it. Yet there's a silver lining. If we are powerful enough to cause these problems, we might also solve them. "Unless there is a global catastrophe," Crutzen wrote in the journal *Nature*, "mankind will remain a major environmental force for many millennia. A daunting task lies ahead." —JUSTIN WORLAND

12,000

Approximate length, in years, of the Holocene era before it came to an end thanks to human impact

Divisions of geological periods



TICKER

Brazil's Rousseff ousted

Brazilian lawmakers voted to impeach Dilma Rousseff, the country's first female President, on Aug. 31, after accusations of mishandling the budget to hide a deficit. During her Aug. 29 testimony to the Senate, Rousseff said she was a victim of a parliamentary coup.

U.S. meets Obama refugee target

The U.S. welcomed its 10,000th Syrian refugee this fiscal year on Aug. 29, meeting a target set by President Barack Obama in September 2015. The arrival comes as Obama prepares to host a summit on refugees during the U.N. General Assembly in September.

Maine governor under pressure

Maine Governor Paul LePage was heavily criticized by state lawmakers over a vulgar voice mail he left for a legislator he says called him racist. The Republican hinted he might resign over the furor but later backtracked.

German moms must reveal fathers

Germany has drafted legislation that would make it an offense for mothers not to tell their husbands or partners if their child was fathered by another man. It has been nicknamed the "milkmen's kids law" by the media.



BUILDING BRIDGES The Yavuz Sultan Selim bridge opens in Istanbul on Aug. 26, days before President Recep Tayyip Erdogan was scheduled to meet his U.S. counterpart Barack Obama on Sept. 4 at the G-20 summit in China. It's the leaders' first meeting since a failed Turkish coup attempt in July and comes soon after Turkey's clashes with Kurdish forces during its recent military incursion into Syria. *Photograph by Ozan Kose—AFP/Getty Images*

WORLD

A looming power vacuum threatens Uzbekistan

THE 25-YEAR RULE OF UZBEKISTAN'S FIRST AND only President may be over. The state of Islam Karimov's health is unknown after his daughter said he had suffered a brain hemorrhage on Aug. 29. His death was already reported by independent media and, if confirmed, would throw this power center of Central Asia into uncharted territory:

IRON FIST Karimov has ruled this country of 30 million since Mikhail Gorbachev made him First Secretary of Soviet Uzbekistan in 1989. After being elected President following independence in 1991, he crushed his political opponents, rigging elections—he won his fourth term in 2015 with 90% of the vote—and imprisoning and killing dissidents. Torture and other abuses are said to be commonplace; his regime allegedly killed a pair of religious prisoners in 2002 by boiling them alive.



POOR PLANNING Karimov has no heir apparent, and his eldest daughter Gulnara Karimova, once tipped to be his successor, fell from grace and has not been seen in public since 2014. Experts say the head of the regime's fearsome security arm, Rustam Inoyatov, may choose a successor from Karimov's Cabinet to prevent a power struggle, but the uncertainty could imperil the entire region.

TOUGH JOB Uzbekistan is rich in resources and occupies a strategically key stretch of land between the Middle East and China but has become isolated and impoverished under Karimov's rule. Without an effective leader to control internal squabbles or fix an ailing economy where corruption is endemic, there may be a long-term risk of Islamic extremists—like those fighting across the border in Afghanistan—seeking to take advantage of a country in crisis.

—TARA JOHN

◀ *Uzbek dictator Karimov ruled as the indispensable man*

DATA

LIVING OVERSEAS

An annual survey by InterNations of 14,000 expats living in 191 places found that Taiwan was the best location to live abroad, going by such factors as quality of life, job security and cost of living. Here's a sample of the rankings:



1
Taiwan



3
Ecuador



19
Bahrain



25
U.S.



59
Italy



TICKER

Mother Teresa to be made a saint

Pope Francis will canonize Mother Teresa at a Mass in St. Peter's Square on Sept. 4. The Catholic nun, who died in 1997, will become known as St. Teresa of Calcutta. The Albanian missionary won a Nobel Prize in 1979 for her work with the poor in India.

Russians hacked voter databases

Russian hackers were behind attempts to interfere with voter-registration databases in Illinois and Arizona, according to media reports. While the hacks did not appear to succeed in altering or deleting records, Illinois officials said data was stolen from 200,000 voters.

Obama commutes more sentences

President Obama commuted the sentences of 111 prisoners on Aug. 30, bringing the number of early releases he has granted to 673—more than the previous 10 Presidents combined. Most were drug offenders.

Stanford sex offender to be freed

A former Stanford University student was due to be released from jail on Sept. 2 after serving half of his six-month sentence for sexual assault. The judge in Brock Turner's trial was heavily criticized for being overly lenient in his sentencing.

THE RISK REPORT

A disgruntled Iran causes trouble

By Ian Bremmer

IRANIAN SHIPS PROVOKED FOUR SEPARATE incidents with U.S. military vessels in the Persian Gulf at the end of August. And on Aug. 28, a member of the Iranian nuclear negotiating team was arrested by Iranian officials on espionage charges. Iran's Supreme Leader Ali Khamenei is growing restless and lashing out.

More than a year after the nuclear deal was signed, relations between the U.S. and Iran remain frosty. Tehran is irked by the fact that Washington continues to insist that Syria's Bashar Assad must go, while Iran continues to support him. Tehran is also angered by Washington's continued support for Saudi Arabia—Iran's longtime rival for Middle East dominance—in that country's flailing war effort in Yemen.

But most of all, Iran's leaders are deeply frustrated that the nuclear agreement hasn't revitalized the Iranian economy, a main selling point of the agreement to the Iranian people and skeptical hard-liners. Iranian leaders blame the U.S. for not living up to its end of the deal. Iran still can't readily access American banks, which severely limits its financial dealings; the limitations were put in place not because of the nuclear issue but because of Iran's sponsorship of terrorism and its human-rights record. European and Asian banks are wary of dealing with Iran for fear that U.S. sanctions could still reach them. And for all the potential of the Iranian

market, the country's geographic curse—its neighborhood includes the somewhat less-than-stable states of Syria and Iraq—still weighs on the minds of foreign investors.

The U.S., for its part, is concerned about Iran's continued development of its ballistic-missile program, which Washington views as contrary to the spirit of a key U.N. resolution. It's also flustered by Iran's seesawing relationship with Russia. On Aug. 16, Russia announced that it had been granted access to Iranian bases to bomb Syria. It was a surprising move given Iran's historic sensitivities about sovereignty. But just a week later, Tehran rescinded that invitation, claiming that Moscow's constant crowing about its use

Relations between the U.S. and Iran remain frosty

of Iranian bases was both “ungentlemanly” and a “betrayal of trust.” Washington and the West had been worried that a budding Iranian-Russian alliance would complicate their political and economic inter-

ests in the region; now the West has to deal with two maverick countries with something to prove instead of just one.

Iran is in a tough spot. The nuclear deal hasn't paid off as planned. Even with sanctions reduced, it's not the player in the region it once was. This was the year Iran was supposed to become a global heavyweight. That isn't happening. Iran is signaling to the world that it is unhappy and still dangerous, a potent combination.

Of course, things could be worse for Iran. At least it's not Turkey. □

SPACE

Not-so-close encounters

A mysterious blip of energy seemingly from deep space was detected by a Russian radio telescope, leading some to suspect alien contact. But abnormal signals have been misinterpreted before. —Kate Samuelson



Radio telescopes like the Very Large Array in New Mexico scan the skies

WOW? NOT NOW

The famous “Wow!” signal detected in 1977 is often cited as evidence for alien life. But in January, a Florida academic determined that the 72-second emission likely came from two comets.

SPACE HEATER

In 2015, Australian astronomers figured out that the baffling radio signals they had detected during daytime for the past 17 years were caused not by E.T. but by a microwave in their observatory.

SIGNAL FAILURE

Scientists in Arecibo, Puerto Rico, were disappointed in 1997 when a signal seemingly from a constellation 22 light-years away turned out to be from a satellite a million miles from Earth.

Milestones



Wilder as the vaguely malevolent Willy Wonka, in one of his most-loved roles

DIED

Gene Wilder Comic actor of pure imagination

COMIC MADNESS IS WONDERFUL: to watch a character on television or in the movies blow his stack or flip his lid is a kind of safety valve for the stresses of everyday living. But it's the people who seem accidentally funny who always get us the most, and that was Gene Wilder's gift.

Wilder, who died on Aug. 29 at age 83, hadn't had a major film or television role in more than 20 years. But the work he did in the 1970s has not only

endured with the people who saw it the first time around, but also resonates with younger audiences who are seeing it for the first time. Even in his nuttiest roles, Wilder always came off, first and foremost, as serene and sweet-natured, practically glowing with congeniality. But you could sense a subterranean stream of anxiety rushing quietly beneath. His greatness lay in the fact that he acted as if he had no clue it was there. And so when Wilder as Dr. Frankenstein—in Mel Brooks' 1974 movie *Young Frankenstein*—begs the gods to give his creation life, his loopy exhortations are like a hymn

to craziness. Even at his most comically unhinged, he was beatific.

You could see that quality in role after role, particularly in the films Wilder made with Brooks: as the accidentally successful showbiz accountant Leo Bloom in *The Producers* (1968), Wilder treated his character's neuroses as a precious thing, a hothouse flower to be carefully tended and nurtured. As the liquor-guzzling Waco Kid in *Blazing Saddles* (1974), he radiated an aura of dreamy regret, even if he seemed ready to blow.

But Wilder, as funny as he could be, was never too obvious. In his starring role in *Willy Wonka & the Chocolate Factory* (1971), he was the perfect steward of author Roald Dahl's tricky mood and tone. His Willy Wonka was gentle and generous but also vaguely malevolent, though only if you were a child bent on misbehaving. And in his marvelous sequence in Woody Allen's *Everything You Always Wanted to Know About Sex But Were Afraid to Ask* (1972), Wilder plays a doctor who attempts to treat a shepherd who has fallen tragically in love with his sheep, Daisy. Wilder's Dr. Ross thinks the shepherd is nuts. Then he meets the sheep. And as he gazes at her woolly face, the sudden tender lovesickness that clouds his eyes is both hilarious and weirdly touching. Even playing a guy in love with a barnyard animal, Wilder could open a small window into the idea of human fragility, reminding us that we can all have feelings that surprise us. The moment is silly, wonderful, unsettling. That's what a great comic actor can do.

—STEPHANIE ZACHAREK

DIED

Juan Gabriel, Mexican singer-songwriter, on Aug. 28 at age 66. The so-called Divo de Juárez was a giant of Latin American music, with over 100 million albums sold and six Grammy nominations.



➤ **Abu Mohammad al-Adnani**, 39, ISIS spokesman and spymaster. He reportedly oversaw external operations, recruitment and training of the terrorist group. ISIS's news outlet reported his death in Syria on Aug. 30, but U.S. authorities had not confirmed it at press time.

FLOWN

The **first regular commercial flight** between the U.S. and Cuba in over 50 years, on Aug. 31. The JetBlue flight took off from Fort Lauderdale, Fla., and landed in Santa Clara. Despite the resumption of relations between the countries, U.S. citizens are still prohibited from visiting the island nation as tourists.

2016 ELECTION

A candidate in Utah blazes a trail just by being herself

By Katy Steinmetz/Park City

DEMOCRATIC SENATE CANDIDATE Misty Snow had just finished a television interview in Salt Lake City when the reporter holding the microphone bade her farewell. “Thank you, sir,” he said on Aug. 23, before correcting himself with a nervous laugh: “Ma’am.” Snow, the first openly transgender candidate running as a major party’s nominee for the U.S. Senate, didn’t let the slipup faze her. It happens from time to time, an accident rather than an aggressive act in one of the most socially conservative states.

At a time when debates over transgender bathroom access have roiled schools and statehouses, Snow is experiencing something else entirely. The Mormon-owned *Deseret News*, like every major news outlet, affirms her as “she” without qualification. Snow’s website biography makes no mention of the barrier she has broken, instead describing her as a millennial and a progressive, working-class activist. Even her opponent, Republican Senator Mike Lee, has said little except to congratulate her on a “historic achievement.” As Snow says, “Utahans are nice.”

THERE IS A JOKE that has been circulating on Facebook to underscore the point. The punch line is that the real story about Snow’s candidacy is her bravery in running as an “openly Democratic candidate” in Utah. On the day TIME spent with her recently, the only time she heartily laughed was when she recalled the gag. “I never ran because I was trans,” she says. During several conversations with voters and staff at campaign events, that *D* was much more the focus than *T*, as people queried her about health care costs and how to reach young voters in a year when doubts about Donald Trump have made Utah liberals more hopeful than usual. To win the nomination, Snow beat a more conservative Democrat



If Snow wins her long-shot bid, she would be the first openly transgender member of the U.S. Senate

in the primary—an antiabortion candidate who promised to push for a “full investigation” of Planned Parenthood. She ran as a woman who supports women’s issues. “Why can’t we guarantee our mothers paid maternity leave like nearly every other country in the world?” Snow implored the crowd at the state convention.

Still, the simple fact of Snow’s running as an openly transgender candidate is a radical act. In October, she will debate Lee at Brigham Young University, where the honor code forbids same-sex behavior and carries a strict gender-specific dress code. Transgender students are handled “on a case-by-case basis,” a university spokesperson says. Earlier this year BYU’s Idaho campus sought (and received) a religious exemption from the federal government when a transgender student complained of discrimination. The appeal suggested that Latter-day Saints teachings discourage gender transitioning, and the church has said those who seek surgery risk their membership. “I couldn’t have

picked a better venue,” Snow says of debating at BYU. Her slogan, after all, is “Fight the status quo. Vote for Misty K. Snow.”

The 31-year-old is an unlikely candidate in other ways too. She is a grocery-store clerk who lives with her mother and did not go to college; she says depression related to her gender identity stifled her ambition through most of her 20s. (Of coming out a few years ago, she says, “It finally got to a point where I couldn’t not do it anymore.”) Like 60% of Utahans, Snow grew up Mormon, but she “fell away” as a teen when she realized she, or someone like her, might not be welcome at the temple. Though she’s never run for office before, Snow has well-honed talking points (\$15 minimum wage, Medicaid expansion, reproductive rights) and a keen sense of detail. She can casually reel off statistics like the number of uninsured children in the state.

With a few thousand dollars in the bank and little national party support, few expect her to topple Lee in the heavily Republican state. But larger issues may be at stake: local supporters like Sheila Raboy, who ran the LGBT center in Salt Lake City for a time, note that suicide is now the leading cause of death among Utah teenagers, and many have drawn the connection to the rejection of LGBT youth by conservative families. “You have a transgender kid in a rural area of Utah, and they’re going, ‘Wow,’” says Raboy. “It says to them there’s hope.”





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BUSINESS

Apple's \$14.5 billion tax spat signals a world of uncertainty for big corporations

By Rana Foroohar

EVER HEAR OF A DOUBLE IRISH?

It's not a drink but one of the controversial tax strategies that help some American companies keep profits abroad at lower rates. Such strategies are at the heart of the Aug. 30 ruling by the European Union demanding that Ireland claw back \$14.5 billion in allegedly unpaid taxes from Apple, the world's most valuable tech company. The record-setting bill aside, it may well turn out to be the most important corporate tax case in history.

The European regulators' investigation concluded that tax arrangements Ireland offered Apple in 1991 and 2007 were illegal, allowing the Cupertino, Calif., firm to pay annual tax rates of 0.005% to 1% on its European profits from 2003 to 2014. Those are much lower than Ireland's standard corporate rate—already the second lowest in the E.U., at 12.5%. In an open letter, CEO Tim Cook disputed the decision and vowed to appeal, adding, "Apple follows the law, and we pay all the taxes we owe." Ireland's Finance Minister said the country would also fight the ruling.

MORE THAN ONE admittedly enormous bill is at stake. In all, American companies have an estimated \$2.4 trillion overseas—a cash pile that's been building for years as firms try to avoid the higher-than-average U.S. corporate tax rate by jumping through overseas loopholes or striking country-by-country deals like Apple's. In recent years, multinationals have grown more unsettled as a slow-moving international effort to curb aggressive tax avoidance—and capture some of those profits—has gained steam.

Apple, for example, is only the most recent target for the E.U., which



^
CEO Tim Cook pushed back, writing, "The European Commission has launched an effort to rewrite Apple's history in Europe ... and upend the international tax system."

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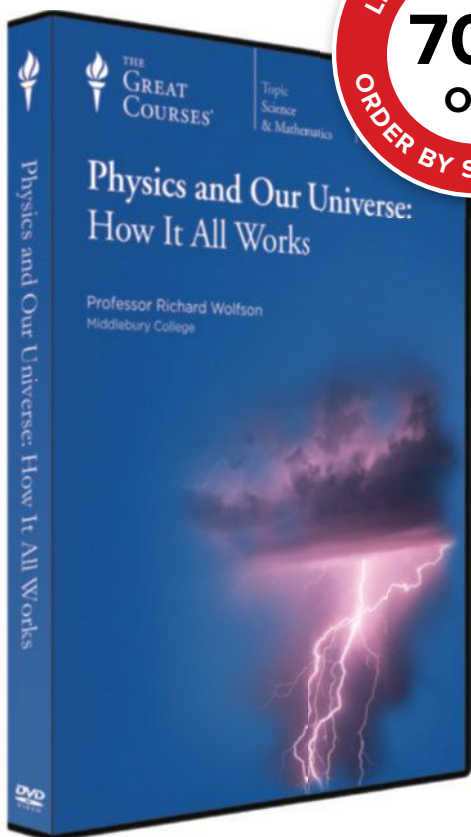
The amount of profit Apple is estimated to be holding offshore, according to Citizens for Tax Justice, up from \$158 billion in 2014

has also gone after Starbucks in the Netherlands and Fiat in Luxembourg. But the Apple case takes the fight over so-called tax optimization—strategies companies employ to legally lower the taxes they owe—to a new level. For starters, it has deepened a rift in U.S.-E.U. economic relations. The U.S. Treasury Department has asked the E.U. to back down on the Apple case, and there are threats of congressional tax retaliation against European firms in the U.S. if it goes ahead. But while it's clear that the U.S. wants some of the money Apple is keeping abroad and is worried the E.U. might get to it first, it's a difficult argument for U.S. authorities to make.

That's because, in principle, American and European regulators agree on the need to squash country-specific tax loopholes and provide multinationals clearer rules. It's in both the U.S.'s and the E.U.'s interests to work more closely together on tax harmonization and mutual rules for combatting a global race to the bottom on taxes. After all, one of the reasons corporations are able to optimize is that they can arbitrage one nation's system against another's. But this is not the road the world's two largest economic blocs appear to be on, as rhetoric on both sides of the Atlantic heats up.

There are problems with the current global system far beyond potentially uncaptured taxes. Big firms may now worry that their past seemingly legal behavior could generate huge bills for allegedly unpaid back taxes, depressing their willingness to expand. Even as big firms have stowed cash abroad, many have borrowed money in the U.S. debt markets at low interest rates. Unfortunately, most use that debt to fund share buybacks that enrich mainly the wealthiest Americans, rather than invest in job- and growth-creating research and development.

The E.U. decision in Apple's case, meanwhile, will no doubt lead to appeals up to the economic zone's highest court. The final result could take years to adjudicate. What is clear now is that the fight ahead is about much more than one company's headline-making tax bill.



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LightBox

Young survivor

A girl sits in shock after an attack on the rebel-held Bab al-Nairab neighborhood of Aleppo, Syria, on Aug. 27. Activists say government helicopters dropped a barrel bomb as civilians were mourning victims of an earlier attack, then another after rescuers arrived.

Photograph by Abdalrhman Ismail—Reuters

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A portrait of Tom Hanks, a middle-aged man with short, graying hair, wearing a dark cord jacket over a light blue button-down shirt. He is smiling slightly and looking towards the camera.

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The View

'CHANGING MINDS REQUIRES COMPASSION AND UNDERSTANDING, NOT DISDAIN' —PAGE 26



When engineers make racially insensitive mistakes, it doesn't always mean they are racists

SOCIETY

Is technology capable of being racist?

By John McWhorter

WE ARE TOLD OF LATE THAT WE MUST entertain whether technology can be a racist. Like when Google Photos, in 2015, algorithmically identified black people as gorillas. Or earlier this year when Microsoft's Twitterbot Tay, designed to emulate human conversation by trawling tweets, sucked up racist nonsense along with everything else and started spouting some of its own. Or when, in August, Snapchat offered a selfie-altering filter that rendered users as an offensive Asian caricature.

Of course these things should not, once noticed, stay as they are. (All of the examples above were altered or taken down.) But are they racist—i.e., evidence that contempt for racial minorities is the warp and woof of our society still?

The fact that we are trained to approach such things from that perspec-

tive calls for some words from James Baldwin, someone few consider to have ever gotten much wrong on race. Here he is in 1962: "I do not know many Negroes who are eager to be 'accepted' by white people, still less to be loved by them; they, the blacks, simply don't wish to be beaten over the head by the whites every instant of our brief passage on this planet."

To Baldwin, the issue was getting rid of segregation and police brutality, not cleansing whites' hearts of all racist sentiment, which blacks of his generation considered beside the point, not to mention impossible. I suspect many today concur—Baldwin's quote is very Black Lives Matter—but too often we get our heads turned in unproductive directions. This leads to an obsession not with racism as an obstacle to achievement, but with racism as a

social stain to rub out; it's like trying to shame people who don't recycle or floss.

Machines cannot, themselves, be racists. Even equipped with artificial intelligence, they have neither brains nor intention. The question worth asking is whether the people who created a given technology qualify as racists. We can dismiss the idea that wonks dreaming up these mechanisms deliberately intend to offend people. No one at Google giggled while intentionally programming its software to mislabel black people. Microsoft's engineers were horrified by their Frankenstein Twitterbot.

All three of these flubs were just that, unintentional outcomes that their creators were quick to regret and correct. For example, should we expect these creators to have anticipated that software that codes gorillas as black in color, and perhaps having fullish lips, might apply the same label to black people? They may well have assumed that the recognition software was programmed richly enough to recognize specifically human traits that they needed not worry about this. To instead take the occasion to flay Silicon Valley for not hiring enough black people is hasty: Can we really be certain that a design team with more black programmers would not have made the same flub?

Tay's programmers, meanwhile, would hardly be alone in underestimating the degree of vicious idiocy on Twitter, and may have assumed that Tay's being asked normal, neutral questions would not have sparked links to noxious vitriol. These were, in a word, bugs. Bugs in programs involved chiefly in labeling and language are bound, at some point, to create offense.

The Snapchat filter stands out. Clearly somebody in creative there is on the clueless side (and Snapchat is one of the tech companies that refuses to report on the racial composition of its staff). However, cluelessness is not bigotry. Eyes like the ones used by Snapchat are legion in anime-derived emojis, for example. A sane person could well assume, although perhaps in haste, that such a facelet was within the bounds of decency.

Our culture has gotten to the point that we consider it our jobs to say these mistakes indicate "racism," with the implication that the designers and the people who hire them are therefore "racists." This disproportionate disgust is a touch medieval in two ways. Imputing bigotry to a computer program is like imputing a spirit to a tree. And calling a Silicon Valley computer programmer a racist is like deeming one's innocent next-door neighbor a witch for being less than perfect. In a healthier moment there would be more room for saying that these people simply made a mistake.

McWhorter is an associate professor of English and comparative literature at Columbia University

VERBATIM

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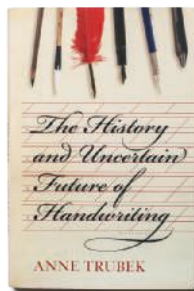
JOHN ELLISON, dean of students at the University of Chicago, pushing back against recent college trends in a letter to incoming freshmen



BOOK IN BRIEF

The future of handwriting

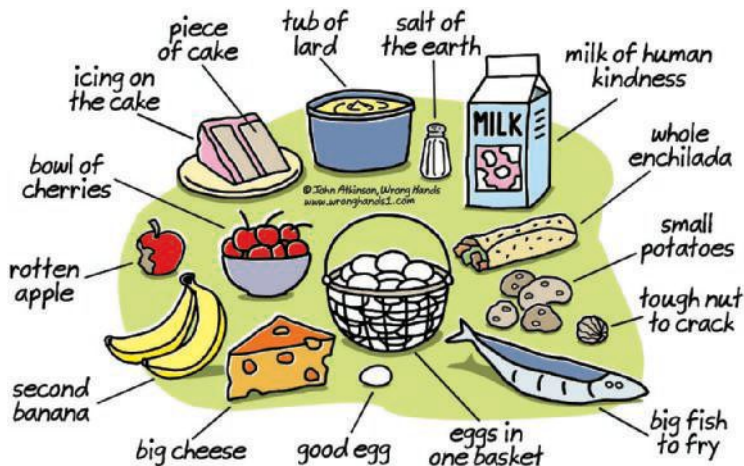
IT'S EASY FOR ADULTS TO BEMOAN that kids today are growing up typing, not writing. But the typed word is no less intellectual than longhand, argues Anne Trubek in her new book, *The History and Uncertain Future of Handwriting*. Our attachments to handwriting, she explains, are "primarily emotional," and our associations with intelligence and neat lettering have fluctuated over time—we've variously linked bad handwriting with intelligence (think: doctors) and stupidity (teachers have been found to subconsciously give lower grades to papers with worse penmanship). What's important is not the neatness of our prose but the volume: "If anything, we are in a golden age of writing," Trubek contends. "Most Americans write hundreds if not thousands more words a day than they did 10 or 20 years ago. We have supplanted much talking and phone calling with texting, emailing and social media."



—SARAH BEGLEY

CHARTOON

Idiomatic dietetic schematic



JOHN ATKINSON, WRONG HANDS

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BIG IDEA

A safer Sandy Hook school

Almost four years after a gunman killed 20 students and six educators on Dec. 14, 2012, Sandy Hook Elementary School in Newtown, Conn., has reopened. The new building, said superintendent Joseph Erardi Jr. in July, has a “warm and calming environment”—but also security that is “second to none.” Architect Barry Svigals says his firm bridged that gap by designing several key elements. Among them: classroom doors that look like wood but are actually stainless steel; bright, open areas that can be sealed off from classroom wings; and impact-resistant windows that offer views of nature and of anyone who’s approaching the school. —*Julia Zorthian*



VIEWPOINT

We shouldn’t dismiss people who deny facts

By Sara E. Gorman and Jack M. Gorman

IT’S EASY TO DISMISS PEOPLE WHO believe things that are factually incorrect—that vaccines cause autism, for example, or that climate change isn’t real. But if we really want to change how they think, we need to take an honest look at what’s driving those beliefs. Because it’s not ignorance, it’s psychology.

All of us are prone to the same fundamental human principles that cause these cases of scientific denial. Research has proven that humans are distinctly uncomfortable with events or phenomena without clear causes, and when we don’t know something, we tend to fill in the gaps ourselves. Take autism. Since we don’t know why it occurs, it becomes easy to misplace blame. Moreover, humans do not assess risk

in a measured or rational manner. Instead, we often conjure an image of a scenario in our minds. Because we are fundamentally empathetic creatures, we respond more to stories than to statistics. That’s precisely what makes it more natural for antivaxxers to “imagine” the risk of their children dying from a vaccine than it is for them to comprehend statistics that say otherwise.

Rather than chastising people for focusing so heavily on stories, we should figure out why we are all so drawn to stories in the first place. Changing minds requires compassion and understanding, not disdain.

The Gormans are the authors of Denying to the Grave: Why We Ignore the Facts That Will Save Us



DATA THIS JUST IN

A roundup of new and noteworthy insights from the week’s most talked-about studies:

1

HOW YOU BELIEVE MEAT WAS RAISED AFFECTS HOW GOOD IT TASTES

A new study in the journal *PLOS One* found that people thought meat looked, smelled and tasted better when they were told it had been raised on a humane farm as opposed to an industrial feedlot.

2

COFFEE ADDICTION MIGHT BE GENETIC

A study in *Scientific Reports* that compared how much coffee people drink to their genomes found that a certain gene, *PDSS2*, may make people more receptive to caffeine. This could help explain why some people get more of a kick from their morning coffee.

3

OLDER PEOPLE ARE HAPPIER THAN PEOPLE IN THEIR 20S

A study in the *Journal of Clinical Psychiatry*, which focused on a sampling of people ages 21 to 99 in San Diego, found that people in their 20s and 30s had the highest levels of anxiety, depression and stress, while people in later generations had higher levels of happiness.

—J.Z.

99 Tips to Make Your Retirement More Comfortable

While it's easy to imagine retirement as a time of relaxation, enjoyment and fun, the fact of the matter is that a successful retirement doesn't just happen. It takes thought, planning and action. To help *Time's* readers get ready for retirement or make your retirement even better, Fisher Investments has assembled 99 retirement tips.

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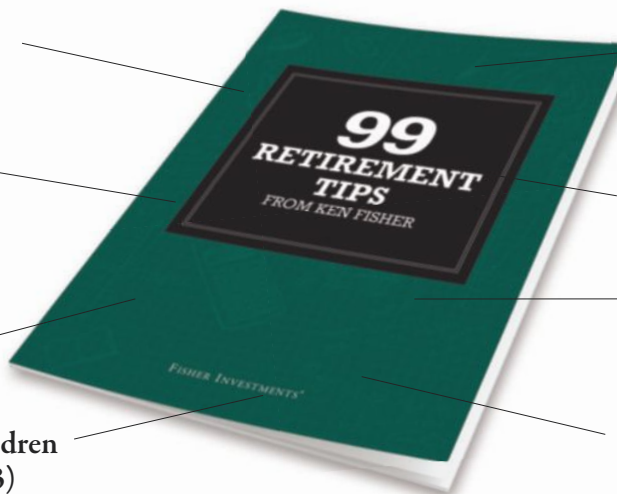
Talking with adult children about money. (Tip #23)

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TECHNOLOGY

Why self-driving trucks may be the next big thing on the road

By Katy Steinmetz

ON INTERSTATE 280 OUTSIDE SAN FRANCISCO, TOWERING white Volvo semitrucks have been driving themselves around for months—under the careful supervision of humans in the cab. Otto, a startup founded by automation experts eager to get their inventions out of the lab and onto the road, has been working to reinvent commercial trucking since it was founded in January. And in August, ride-sharing giant Uber announced it was acquiring Otto and its 91 employees in a deal worth an estimated \$680 million.

One fresh shake-up keeps following another among companies that have promised to sell self-driving vehicles and services. Along with the Otto buy, Uber revealed that customers would be able to summon autonomous rides in Pittsburgh by September. Weeks earlier, it sold its Chinese division to market leader Didi Chuxing, getting a hefty stake in return. Didi had previously forged a partnership with Uber's bitter U.S. rival Lyft, which has reportedly held talks to sell itself to Google—a company with its own ambitious self-driving-car division—or General Motors, which invested \$500 million in Lyft earlier this year with avowals that the two would automate ride-sharing vehicles together. (Lyft executives deny that they have shopped the company around.)

Many in the automotive and technology worlds are convinced that self-driving vehicles are the future. But who gets there first (old-line automakers, new-economy startups) and how (by selling passenger cars, taxi services, commercial vehicles) is still unclear. Because self-driving ventures tend to draw on a relatively concentrated pool of engineers, executives and investors, the nascent field has rapidly become a small but tightly bound web of connections.

OTTO, NOW PART OF THAT WEB, is focusing on bringing a product to market “sooner rather than later,” as co-founder and former Google Maps head Lior Ron puts it. The company aims to retrofit existing long-haul trucks with tech that enables self-driving solely from exit to exit on freeways, which poses a more manageable set of problems than fully automating passenger vehicles. For starters, that means no city driving and fewer pedestrians, traffic lights and complex intersections.

The company believes there is much greater incentive for highway-autonomous big rigs to be widely adopted quickly. During a test drive I sat in on, an Otto employee took the driver's seat, letting his hands hover close to a computer-controlled steering wheel. Otto product manager Eric Berdinis, relaxing in the back, argued that many self-driving features aimed at ordinary consumers amounted to mere convenience. But outfitted with the right tech, truck drivers stand to benefit much more: lowering the likelihood of crashes, increasing fuel efficiency, saving on gas and getting more use out of an expensive asset. Trucks often sit idle because drivers



^
Otto has been testing self-driving tech on five big-rig trucks in California and several other states

4%

Percentage of registered vehicles in the U.S. that are large trucks

500 million

Gallons of fuel that could be saved annually with a 1% increase in efficiency

70

Maximum average number of hours U.S. truck drivers are allowed to work each week


SOURCES: FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION; AMERICAN TRUCKING ASSOCIATIONS

must abide by safety limits on how much they can drive in a given week. In theory, the driver of a truck with Otto's technology could go off duty and sleep in the back, collecting the usual rate per mile as computers take over for a while.

OTTO'S FOUNDERS WERE attracted to the tie-up with Uber partly because they want to develop a marketplace for truck drivers, connecting thousands of freelancers directly to customers who need goods shipped, much as Uber connects its users to nearby drivers. That program, like promising laser-sensor technology that reads a detailed picture of the environment, is still being developed.

And freeways still pose challenges. On our test drive, that human in the driver's seat twice punched a big red button that disengaged the automated system so he could take over, once to avoid debris and again when traffic backed up near a construction zone.

For now, courting potential problems is the point. Otto wants to encounter every possible scenario that algorithms must be ready to navigate if the driver is, say, snoozing. “We believe the best way to proceed is very real, vs. being in the ivory tower and developing stuff for the sake of developing stuff,” says Ron, sitting in a new Uber research facility plastered with Otto's logo. “That's why we're focusing on trucks.” It may not yet be clear what the future of automated transport will look like, but the industry's innovators want to get there fast. □



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Politically incorrect? Or master strategists? Try both

By Kareem Abdul-Jabbar

ACCORDING TO MANY POLITICIANS, AMERICA HAS A LIFE-threatening illness more deadly than the Zika and Ebola viruses combined. Its name: political correctness. Since the early 1990s, *politically correct* has been the go-to phrase to whip up support from people who think social tolerance has become threatening, excessive or frivolous. The 2016 presidential campaign has been especially virulent about the issue.

“Political correctness is killing our country,” Donald Trump tweeted. Ben Carson, when he was briefly the leading Republican candidate, told Fox’s Bill O’Reilly that political correctness was “destroying our nation.” Ted Cruz criticized President Obama’s policies toward ISIS by claiming that “political correctness is killing people.” Marco Rubio complained that the reason he didn’t discuss his faith in public was that he “had been conditioned by political correctness.” Jeb Bush joined the choir with “The political correctness of our country needs to be shattered.”

A majority of Americans agree with them. Nearly 60% of Americans said political correctness is a problem in our country. Those worried that we’ve gone too far in our pursuit of political correctness falls pretty solidly along party lines: twice as many Republicans as Democrats think it’s a problem. Only 18% think we aren’t politically correct enough.

This apocalyptic backlash against what seems like a relatively benign combination of good old-fashioned manners and simple sensitivity toward others stems from several factors, including a growing rage, fear and frustration among many Americans as the country continues to evolve into something different from what they are used to. Just as it did for their parents and grandparents. New technology can make us feel foolish, rapidly changing trends make us feel marginalized, and the eroding of our familiar and comforting traditions leaves us uncertain and uncomfortable. Every generation must deal with mourning the loss of its good ol’ days. It’s hard for many Americans to reconcile their romanticized fantasy of Main Street USA with today’s reality. The truth is that only 46% of children 18 and under live in a home with two heterosexual parents who are in their first marriage. In 1960, 73% did. But Mayberry isn’t coming back.

Right now, this understandable but misplaced angst is directed at incidences of political correctness that seem to go to new extremes to avoid insulting, offending or marginalizing anyone. We all get that. It seems as if every day there’s another report of some public officials’ overreacting to a perceived insensitivity. A survey at Yale University had 63% of students wanting professors to issue “trigger warnings” before saying anything that some might find offensive or could cause painful emotions. Many critics have described this new avoidance of microaggression as coddling students, who should expect



WAR OF THE WORDS

Percent who say ...

Too many people are easily offended by language

People need to be more careful with language

Total

59 39

Men

68 31

Women

51 46

White

67 32

Black

30 67

SOURCE: PEW RESEARCH CENTER

their opinions to be challenged in college to better prepare them for the real world outside. That “coddled” assessment seemed confirmed when 25 students at UCLA staged a sit-in because a professor had corrected the spelling and grammar errors on graduate-level essays. They accused him of creating a “hostile campus climate” for students of color. Students at the University of New Hampshire were issued a list of resources to help them avoid offensive language such as *American* (because it suggests the U.S. is the only country in the Americas), *homosexual* (PC version: “same-gender-loving”), *elderly* (“people of advanced age”) and *healthy* (“nondisabled”). Comedians Jerry Seinfeld and Chris Rock have said the climate of political correctness is so restrictive that they have stopped performing on college campuses. Comedian Bill Maher has complained of “political-correctness Nazis” who “hound me to censor every joke and apologize for every single slight.”

FOR MANY AMERICANS, the abuses of political correctness extend to beloved social traditions. Saying “Happy holidays” instead of “Merry Christmas” seems to some a sinister attempt to restrict religious expression rather than a way to include non-Christians in the holiday spirit. A school in Connecticut attempted to ban Halloween costumes out of concern that some children might feel “excluded from activities due to reli-



Yale students
at a protest
against racial
insensitivity
last November

gion, cultural beliefs, etc.” Angry parents quickly forced a reversal of that policy.

Here’s the problem with using these examples to attack the validity of political correctness: every political and social policy or tradition has examples of excess. We don’t define the value of a policy based on incidences that might seem extreme. We can point at the absurd behavior of zealots around all our most cherished values. We poke fun at “helicopter” parents for being overprotective of their children, but that doesn’t mean we want to erase safety laws and policies that protect kids.

We can look rationally at the original problem that political correctness was supposed to address and ask if it’s had a significant effect in making things better. The success rate of political correctness is difficult to judge because there are so many other factors that can influence an outcome, including not knowing how many generations have to commit to political correctness in order to scrub out the centuries-old biases of America’s collective unconscious. For now, it’s a declaration to the world, not unlike our Declaration of Independence, that America stands for certain inalienable rights.

There is some evidence that it works. Research at Cornell University concluded that political correctness may aid the creativity of mixed-gender work teams. “[Political correctness] facilitates

idea expression by reducing the uncertainty that people tend to experience while interacting with the opposite sex,” said Jack Goncalo, an associate professor of organizational behavior. “Establishing a clear guideline for how to behave appropriately in mixed-sex groups made both men and women more comfortable sharing their creative ideas.” Even on a purely anecdotal level, we can look around and see younger generations growing up to be more aware of instances of discrimination based on gender, race, religion or gender identity and not accepting it as the status quo. Armed with this awareness, they will be more self-reliant, stronger and more tolerant of others. Better Americans.

Yet opponents are using extreme examples to do exactly what we were doing before political correctness pointed out the racism, misogyny and homophobia embedded in the cultural foundation of America. Which is to do nothing. Deriding political correctness gives people permission not to fix a problem, because we can claim instead that it doesn’t exist. The real problem, they want to tell us, is the cure. As do vaccination deniers and climate-change skeptics. Or all those hardcore smokers back in the 1960s and 1970s who laughed at the warning labels about the damage cigarette smoking could do. They accused the government of being too much of a scolding parent. Rallying that ol’ “We’ll show you government intruders who’s boss” spirit, smokers boosted cigarette sales by more than 7.8 billion in 1966, the year the labels first appeared on cigarette packs. To prove the government’s point, about half of all those who smoke regularly will die prematurely. This doesn’t include the damage to nonsmokers who are harmed by secondhand smoke or by their mothers’ smoking while pregnant. Arrogantly clutching onto wrongheaded traditions is damaging to the country.

At a rally in February, Trump repeated with mock shock what a woman in the audience had just shouted about Cruz: “She said—I never expect to hear that from you again! She said: ‘He’s a pussy.’ That’s terrible.” Of course, the audience shouted its approval, even as Trump pretended to be offended.

Sure, we could all laugh at his frat-

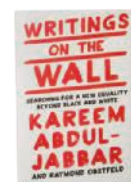
boy humor and call him a straight-talking regular Joe. But there are serious consequences to insulting someone by calling him or her a vagina. Every time we laugh at this context, we’re endorsing the continuing narrative of women as less than men. Every time a male coach berates his players by referring to them as “ladies” or tells them to “hike their skirts” while playing, we’re perpetuating an atmosphere where women are not men’s equals.

THE ANTI-PC RHETORIC is a clever tool by politicians who wish to distract voters from the real issues by tapping into their darkest fears about people who are different from them and, at the same time, allowing the politicians not to have to fix the problem. It’s the magician’s trick of misdirecting the audience’s attention to the left hand while the right hand does the work. It’s genius—as long as voters are zombified to the point of not thinking for themselves.

Which is exactly what politicians want. They want you to feel and behave like children while they pretend to be the all-knowing benevolent father. While they rile you up about how immigrants are stealing your jobs, they distract you from enlightening facts, including the assessment of some experts that the influx of Latino immigrant workers of the past 25 years has had less effect on employment patterns than factories that moved abroad, the decline of labor unions and the recurring recessions. So while we’re told to focus on building a massive wall to keep out immigrants, the real causes of job loss and economic instability continue unabated.

We’re better off taking back the reins of our future by following the suggestion of 1 Corinthians 13:11: “When I was a child, I talked like a child, I thought like a child, I reasoned like a child. When I became a man, I put the ways of childhood behind me.”

Of course, to be PC, it should read, “When I became an adult.”



Abdul-Jabbar is a six-time NBA champion, a TIME contributor and the author of Writings on the Wall, from which this was excerpted

The wild EpiPen price hike points to a looming pharmaceutical crisis

By Peter Atwater

“I LEGISLATED” IS NOT A PHRASE TYPICALLY ASSOCIATED with corporate executives, who lack constitutional powers. Yet during a television interview on Aug. 25, Mylan CEO Heather Bresch used just those words as she described a program that expanded the availability of her company’s EpiPen epinephrine injectors, which deliver epinephrine during allergic reactions, in schools across the country. Bresch made herself personally responsible for the law.

As the daughter of Joseph Manchin III, the senior U.S. Senator from West Virginia, perhaps Bresch could be forgiven for her overreach. Still, what she unwittingly brought into the open was deeply revealing: when it comes to pharmaceutical policies, the line between the regulated and the regulators has become blurred.

The last time entanglement between the public and private sectors was this front and center was during the mortgage crisis. At the peak of the housing market, the roles of banking regulator and Wall Street banker—once appropriately adversarial—had morphed into one. Conflicts of interest and reasonable risk management were traded for profits.

MANY OF THE SAME SYMPTOMS of overconfidence have been on display in the health care space—with similar consequences. Just as housing prices skyrocketed, thanks to lax regulation, abundant credit and Wall Street aggressiveness, so too have drug costs. Mylan is hardly alone in taking advantage of an environment ripe for excess, as we know from the fallouts at Turing Pharmaceuticals, where Martin Shkreli increased the price of an AIDS drug 5,456% overnight, and Valeant Pharmaceuticals International, where price increases were a regular and widespread business tactic. Starting when Mylan acquired the drug in 2007, Bresch raised the price of a pair of EpiPens (they’re sold in twos) more than 400%. As Bresch herself offered in that interview, the system “incentivizes higher prices.”

If history holds, those higher prices are about to be a thing of the past. In the housing crisis, voters were underwater homeowners; today they are price-wary health care consumers. With wage growth anemic, Washington has no incentive to support high drug prices and every incentive to cut them aggressively. And yet the pharmaceutical industry remains mulish. If Wall Street was tone-deaf to the plight of Main Street during the housing crisis, the pharmaceutical industry may lack ears altogether. Many industry executives not only fail to appreciate the current level of economic anxiety, but also underestimate the seething below that surface. Overnight, the EpiPen has become a lightning rod.

Already, consumer outrage has focused on Washington, where the FDA delayed a potential EpiPen competitor from entering the market. Meanwhile, a political group for Mylan has donated to many of the Senators on the Judiciary

SPIKING NEEDLES

\$608.61
New price
of a pair of
EpiPens.

In 2007, when Mylan bought the device, a pair cost \$93.88.

More than 3.6 million prescriptions were written for EpiPen kits in 2015, according to IMS Health.



Committee that has asked Mylan to explain the price increases. (Mylan responded by agreeing to sell a generic version at half the price.)

According to the Center for Responsive Politics, the health care industry spent more than \$509.8 million to lobby Washington in 2015. Which means a backlash is inevitable: I would not underestimate how far Washington will go in dog piling on drug companies with scrutiny and angry criticism in an effort to save face and restore confidence with voters. Wall Street bankers were Washington pariahs in 2008, but wait until you see the treatment of drug-company executives and lobbyists. Between the industry’s “abusive” pricing strategies and “unpatriotic” tax inversions, they’ll be toxic.

IF YOU THINK EpiPen-demonium is bad, just wait until voters begin to hear about the premium and deductible increases associated with next year’s health care plans. Immigration is about to be replaced with an angry debate on soaring health care costs.

When it comes to our perceptions, one is an event, two is a pattern, three is a trend, and four is fact. After Shkreli, Valeant and Theranos (where greed was a driving force playing to the same incentives), Mylan is fact; and for consumers, that fact is that the pharmaceutical industry is broken and corrupt. Spending \$600 for a few bucks’ worth of a life-saving medicine is simply too ridiculous to even try to reconcile.

But where a similar environment of unbridled excess brought shame to Wall Street a decade ago, this crisis will envelop the entire Eastern seaboard, where so many of these companies are based. While neither the drug industry nor Washington yet realize it, this time they will be under the microscope together.

Atwater is president of Financial Insyghts, which advises companies on consumer confidence in the markets



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Don't believe the new myths about America's white working class

By Joe Klein

THIS HAS BEEN AN ELECTION YEAR FILLED WITH SLOPPY sociology. Democrats, as usual, mistakenly see voters primarily as members of vast, amorphous “identity” groups rather than as individuals. Now the Republicans have joined in. “An odd symmetry has emerged between the political parties,” William Galston of the Brookings Institution told me recently. “Many Democrats have viewed racial and ethnic minorities as victims in the grip of larger forces, and now Republicans are doing the same with the white working class.”

Remarkably, the operating mythology of both groups—encouraged by ideologues on the right and politically correct ninnies on the left—is that they are oppressed by each other. The current term of art among black intellectuals is *white privilege* and the current concern is police brutality. Among Latinos, the concern is bigotry and violence inflicted by gringo yahoos. Meanwhile, working-class whites are convinced that immigrants are taking their jobs and that blacks have long been coddled by public assistance. In a recent *National Review* piece, J.D. Vance, author of *Hillbilly Elegy*, cites research that shows “the average white person now feels that anti-white bias is a bigger problem than other forms of racial discrimination.”

HILLBILLY ELEGY has been the book of the summer among the political cognoscenti of both parties. It is Vance's memoir of his escape from the Appalachian culture of pride and poverty—a culture that seems to be disintegrating, much the way the black working class fell apart starting in the 1960s, but without the history of racial oppression. The white out-of-wedlock birthrate, which is about 30%, is now higher than the black rate was (about 25%) when Daniel Patrick Moynihan correctly identified family disintegration as a significant problem in 1965. The current black rate has been stuck at about 70%.

There is significant irony here: the culture described in *Hillbilly Elegy* is so similar to that of the black underclass that it demolishes the perennial racist argument that these sorts of behaviors—sexual profligacy, drug dependency, violence, indigence and a free-range sense of helplessness that leads to irresponsibility—are unique to African Americans. Something else, something far more complicated is going on, a cultural dilemma that has erupted with the “liberation” of American society over the past 50 years. It is a phenomenon that transcends the prevailing liberal (and Trumpian) theory that the white-black underclass was caused by the departure of manufacturing jobs. That may have been true 40 years ago, when the jobs began to leave. But it is less true now, as habits of indolence—the inability to show up to work on time, the

INSIDER'S VIEW



J.D. Vance, who grew up in Appalachia, attributes his community's problems largely to culture. “Poverty is the family tradition,” he writes, fueled by a sense of “learned helplessness.”

Vance credits his stint in the Marines for his confidence to break out of his hometown's “world of small expectations” and absorb the military's lessons of “learned willfulness.”

refusal to follow orders on the job, the preference to hang out at a home often subsidized by the federal government—have taken hold. Vance worked for a summer in a floor-tile warehouse near his hometown in Ohio. It was relatively easy work, paying \$13 per hour, a good salary in Appalachia. But “the managers found it impossible to fill my warehouse position with a long-term employee.” In hillbilly country, as in urban America, a great many people simply lack the discipline to work.

IT IS EERIE AND DEPRESSING to read Vance's account of his mother—a drug addict in and out of rehab, with a series of husbands and boyfriends rotating in and out of the house. He describes a close relative as “a classic welfare queen.” He writes about 9-month-old babies being fed Pepsi in their bottles, and the abuse of food stamps he saw as a cashier at the local grocery store. All of these things were clichés deployed by Ronald Reagan, and dismissed by liberals, when he railed against poverty and welfare in 1980. But the conservative belief that the underclass was caused by federal antipoverty programs is clearly insufficient too. Vance makes it clear that the problem is profoundly cultural, a consequence of wanton commercialism, the loosening of moral standards and a lack of rigorous training for young men. Vance was saved by the Marine Corps and the support of a single loving adult, his grandmother.

Hillbilly Elegy makes the current political dialogue seem fatuous. Both parties are incapable of discussing the real sources of our national dyspepsia, or how to deal with them. Forces like the global economy, racism and federal programs that cultivated dependency have all been part of the problem. But what we have now is something different: a bottom-up crisis of individual responsibility, largely beyond the reach of public policy. Indeed, some of the “solutions” proposed by each of the parties are likely to make things worse.



The Codebreakers

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This is who we are.

World

Between the devil and the deep blue sea

SMUGGLERS ARE PUTTING REFUGEES ON RAFTS THAT HAVE VIRTUALLY NO CHANCE OF COMPLETING THE DANGEROUS MEDITERRANEAN CROSSING—TURNING EVERY RESCUE INTO A LIFE-OR-DEATH MISSION TO SAVE HUNDREDS OF MIGRANTS

BY **ARYN BAKER**/ON THE MV AQUARIUS PHOTOGRAPHS BY **LYNSEY ADDARIO** FOR TIME



THIS GROUP OF MORE THAN
130 MIGRANTS MADE IT ONLY A
FRACTION OF THE WAY TO EUROPE
BEFORE BEING RESCUED AT SEA



Hurya was cooking dinner when the smugglers told her they had a boat.

Even though the 20-year-old Eritrean hadn't eaten all day, she abandoned her pasta in the rush to gather her few belongings. Over the five months she had spent in Libya, waiting for passage to Europe, she had faced detention, beatings, attempted rape, gunfire and forced labor. "We were so happy to be leaving for Italy that we didn't care about the spaghetti," she remembers.

Then she saw the rickety wooden boats tied up in Sabratha's port, on Libya's western coast. Hundreds of migrants, hailing from across Africa and the Middle East, were swarming the dock. Libyan smugglers barked commands. Some whipped the crowds with lengths of cable. Others waved guns. "My happiness turned to fear," says Hurya. (For security concerns, including the possibility of reprisals against family members of migrants still at home, TIME has agreed not to use any of the migrants' last names.) "There were so many people. And the boats were so small."

At a nearby beach, at the same hour, another group of smugglers inflated a white rubber dinghy. They ordered 18-year-old Keba, from Senegal, to help carry the boat down to the water. He fingered the cheap rubber and wondered how it would last the journey. By the time the rubber dinghy left port just before dawn on Aug. 21, there were 135 people crammed into a vessel not much larger than a rowboat yet somehow meant to make the 300-mile sea journey across the Mediterranean to Sicily. Hurya's wooden boat carried 416, several of them crammed belowdecks, in the storage area. According to rescue logs



PREVIOUS PAGES: GETTY IMAGES REPORTAGE

A GROUP OF MEN SLEEP ON THE DECK OF
THE MV AQUARIUS, HOURS AFTER BEING
RESCUED FROM A SINKING MIGRANT BOAT



made later, each boat was stuffed well beyond capacity; none was up to the rigors of the open sea. They had enough fuel to make the 12-nautical-mile distance to international waters but no farther.

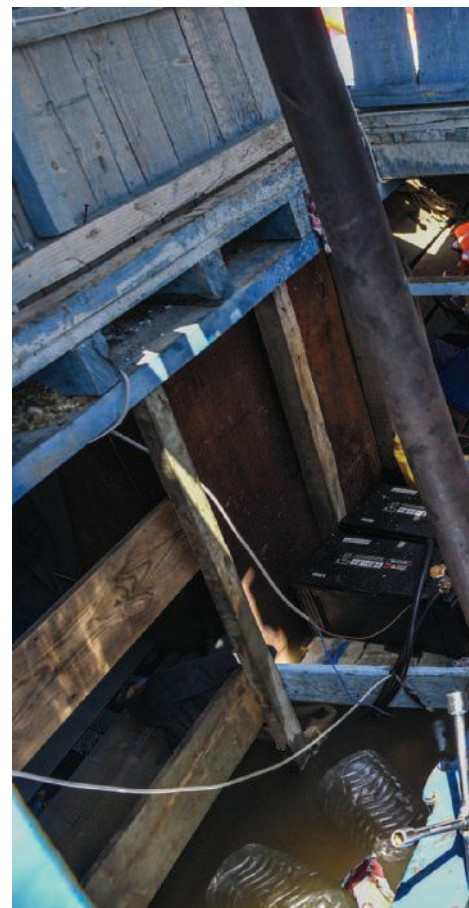
Goodness, a young Nigerian woman, was one of the first to board the rubber boat. The 20-year-old had never seen the ocean before, and she clutched her 3-month-old baby Destiny in terror as the people piled in. Within minutes of starting out to sea, she was vomiting with sickness and fear. The dinghy was so packed, no one could move. Soon the plywood floor that had been nailed to the bottom of the raft took on water and started to buckle. "I thought we were going to die," says Goodness.

The combined 551 people on Hurya's wooden boat and on Goodness's rubber one came from 14 countries and from as far away as Bangladesh. They ranged in age from 3 months to 52 years. They were teachers, cobblers, bulldozer drivers, masons and farmers. Traumas ancient and modern funneled these men and women onto the shores of the southern Mediterranean. And while they grew up worlds apart, they had two things in common: they dreamed of a better life in Europe—and they were willing to risk their lives to get there.

MORE THAN A MILLION migrants crossed the Mediterranean Sea to Europe in 2015, many fleeing the war in Syria. Most traveled the short sea route between Turkey and Greece, less than five miles long at

its narrowest point. That route, however, was effectively closed when the European Union signed a deal with Turkey in March, slowing traffic along the eastern corridor to a trickle. But the human flow has started to shift to the central route from Libya to Italy, one that is longer and more perilous. Unlike in the eastern Mediterranean, it is all but impossible for an overloaded fishing boat to make it across the sea from Libya. The distance is vast, the currents are unpredictable, and when things go wrong, death is more certain. As a result, the number of successful crossings has dipped slightly from last year, to 106,461 people as of Aug. 28, though migration officials expect the numbers will go up as the year continues. So will deaths—already 2,726 migrants have died attempting the route so far this year, compared with 386 on the eastern route. It's more than the total deaths for all of 2015, with one-third of the year still to go.

According to a joint Europol and Interpol report released in May, there are currently more than 400,000 migrants in Libya waiting to make the crossing. That figure will double this year, the report predicts, as those foiled in their attempts to reach Europe from Turkey seek out the central Mediterranean option instead. The only thing protecting those migrants from certain death is a search-and-rescue operation made up of European navies, passing commercial vessels bound by maritime law to aid boats in distress and rescue ships chartered by humanitarian organizations. A smuggling industry esti-



Among the refugees taking the central Mediterranean route this year ...

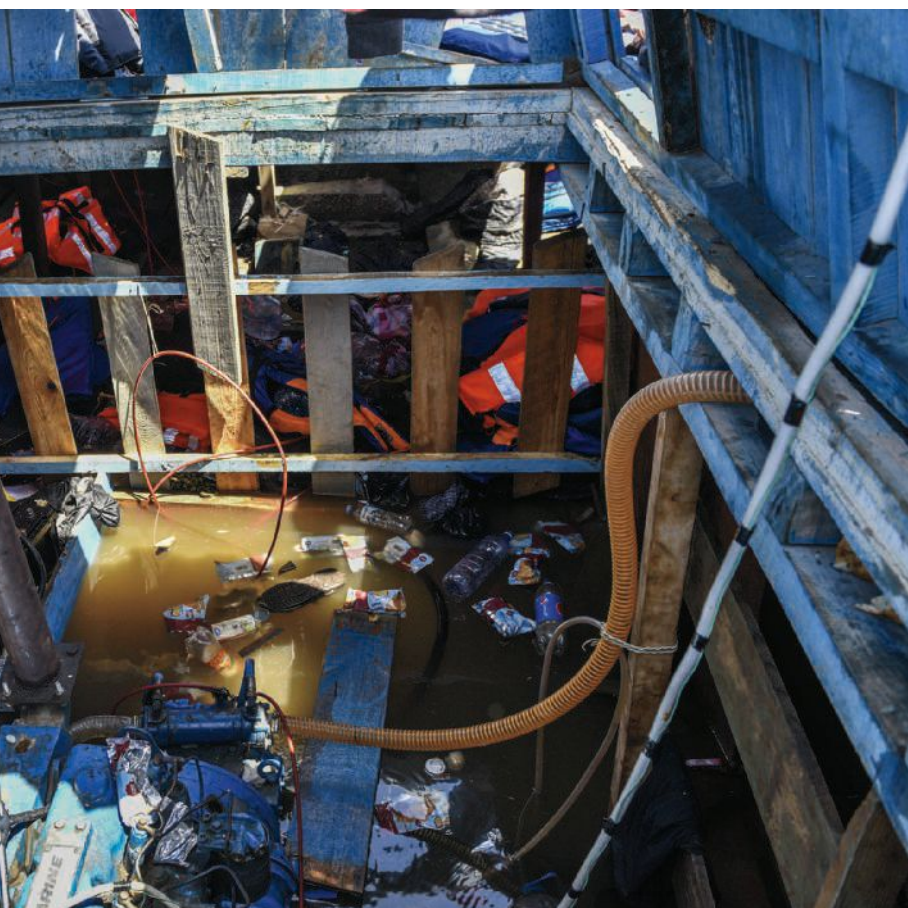
106,461
arrived in Italy

10,986
were intercepted by the Libyan coast guard

2,726
died en route



FROM TOP: HUNDREDS OF MIGRANTS WAIT TO BE PICKED UP FROM A FRAGILE WOODEN BOAT; WATER LEAKS INTO THE EMPTY MIGRANT CRAFT AFTER THE RESCUE



mated to be worth \$5 billion to \$6 billion a year now factors those efforts into its operations, cynically counting on dangerous sea rescues to ensure its clients make it all the way to Europe. “They are setting out in boats that are designed to sink,” says Federico Soda, director of the International Organization for Migration (IOM) Coordination Office for the Mediterranean. “They would all die if there wasn’t someone to help them at some point.”

TIME spent a week in August aboard the *MV Aquarius*, a former research ship now outfitted as a search-and-rescue vessel. The boat is jointly chartered by international medical humanitarian organization Médecins Sans Frontières (MSF), or Doctors Without Borders, and the search-and-rescue organization SOS Méditerranée. It sits vigil off the coast of Libya, one of about a dozen search-and-rescue vessels, along with two surveillance airplanes, that scan the horizon for boats in distress. Italy, because it is the destination of choice for most central Mediterranean crossings, coordinates the rescue response by radio, satellite phone and telex, dispatching nearby ships to the scene. Usually the rescue vessels make it in time, but not always. On Aug. 18, a small wooden boat carrying 27 Syrians capsized before the rescue ships arrived, killing seven and leaving behind a father bereft of both his year-old daughter and his wife.

Aboard the *MV Aquarius*, MSF project coordinator Ferry Schippers read about the disaster on a WhatsApp message board that rescue ships use to communicate on the Mediterranean. A veteran of some of the world’s worst conflict zones over two decades, Schippers reacted to the news with anguish and fury. The number of rescue vessels is simply too small to even spot, let alone intercept, every migrant boat on the vast sea north of Libya. “We are missing boats,” he says. “Even one rubber boat that we miss is 120 people that will definitely not make it.”

African migrants have long used Libya as a jumping-off point for Europe, but until 2011 the government of Libyan dictator Muammar Gaddafi worked with Italy to keep the traffic to a minimum. That ended five years ago, when Gaddafi was toppled and the country dissolved into a vicious civil war. For migrants in Libya, there was no way back home. “They were literally caught between the

WOMEN AND CHILDREN TAKE A MOMENT
TO REST THE MORNING AFTER BEING
RESCUED FROM A SINKING MIGRANT BOAT





devil and the deep blue sea,” says IOM spokesman Flavio Di Giacomo.

As conditions in Libya worsened, many migrants opted for the latter, revitalizing a people-smuggling business that flourished in the power vacuum left by Gaddafi’s fall. Despite a U.N.-brokered deal in December that was supposed to create a unified government, the country remains at war with itself. ISIS has thrived in Libya and has kidnapped and executed migrants in the country for propaganda purposes. Armed groups vie for power with weak government bodies. Smuggling networks work with corrupt police and coast guards to protect their trade.

The uncorking of Libya, combined with massive refugee movements resulting from wars in Syria, Afghanistan and Iraq, has contributed to an unprecedented migration crisis—and a political backlash. More people are on the move than at any other time since World War II, according to the U.N. High Commissioner for Refugees. Fear of migrants has contributed to the rise of right-wing, nationalist politics in both the U.S. and Europe and was a major factor in the U.K.’s recent vote to exit the European Union. World leaders are desperate to find some solution—U.N. Secretary-General Ban Ki-moon has called for a high-level conference on the issue when world leaders meet in September at the U.N. General Assembly in New York City, and European officials are working on a plan with African and Middle Eastern governments to stem migrant flows into Europe. The proposed deals, modeled on March’s agreement between Turkey and the E.U., offer better trade terms, visa deals, security support on the borders and development aid.

But closing the Turkey route has mostly shifted migration, not stopped it. Migrants aren’t embarking on these expensive and risky journeys on a whim. Hurya fled an oppressive dictatorship in her native Eritrea, then endured five years as a refugee in Sudan before making her way to Libya looking for a boat. As long as the wars continue, as long as their home countries offer them no kind of life at all, they will come. “I didn’t want to leave, but I had no choice,” says Keba, the Senegalese man in the rubber dinghy. “There is nothing for us in Senegal.”



GOODNESS, A 20-YEAR-OLD NIGERIAN MIGRANT, RESTS NEXT TO HER INFANT DAUGHTER DESTINY

THREE HOURS after the wooden boat left Sabratha's port, the engine spluttered and died. Mohammad, a 20-year-old Syrian from the besieged town of Daraya, watched in mounting alarm. "We were so scared. Especially the people in the lower deck," he says, referring to a hollow storage space belowdecks packed with people, including children. In panic, they began climbing to the top, destabilizing the boat and causing the craft to begin taking on water. Everyone knew that those trapped underneath didn't have a chance if the boat went down. Mohammad heard a plane above but had no way of knowing if it had seen his boat or if anyone would come in time to help.

It was indeed a rescue plane, and the pilot radioed the *MV Aquarius* for help. The ship was already on its way to assist Keba's rubber boat—just a few miles away—but because the larger wooden trawler had started listing dangerously, and it was so much bigger, it took priority. "We were starting to panic, but when the *MV Aquarius* came, people stopped

being scared," Mohammad says. "Because we knew you were there." It took more than three hours for rescue teams to ferry the wooden boat's passengers to the ship and another hour to empty the rubber boat. MSF's translator kept the passengers calm by constantly repeating, in Arabic, French and English, that they were being taken to a place of safety and that no one would be left behind.

When the refugees arrived on board, most collapsed in a state of exhaustion and spent terror. As harrowing as their short voyage was, the trip across the Mediterranean was for most of these passengers the last step of a journey that had started thousands of miles away, in the impoverished villages of West Africa and the refugee camps of Ethiopia and Sudan. The migrants had paid thousands of dollars to smugglers even before reaching Libya, and by most accounts the land journey across the Sahara was even more dangerous. Migrant convoys are regularly attacked by bandits, and breakdowns claim even more lives. "We don't know

how many people die in the desert," says Soda, the Mediterranean coordinator for IOM, "but we suspect it could be just as many as in the Mediterranean."

Women are particularly vulnerable on the migrant trail. The growth in smuggling networks across the Mediterranean has fed transnational prostitution rings, according to IOM, which estimates that 80% of Nigerian women traveling from Libya to Italy are being trafficked into the European sex trade by organized gangs. Goodness, who was on the rubber boat with her baby Destiny, left Nigeria when a friend offered her a waitressing job in Libya and wired money for the trip. When she arrived in Tripoli, she was instead taken to a brothel where almost 200 women were living. One of the brothel customers offered to pay the owner the cost of her journey—\$4,600—if she went to live with him. But when she became pregnant, the owner sold her to another brothel. After Destiny's birth, Goodness was sold again, this time to a Senegalese man who paid \$1,500 more for her fare to



ERITREAN ORTHODOX CHRISTIAN MIGRANTS SING AND PRAY AFTER THEIR RESCUE

Europe. She says he did it out of kindness, but when a Senegalese man started asking about her at the women's section on the rescue boat, she begged MSF staff not to let him know she was there. (MSF as a policy protects the identities of all unaccompanied women and children on board.)

Over the past three years, IOM has reported rapid increases in the numbers of unaccompanied young Nigerian women crossing the Mediterranean, from 1,454 in 2014 to 5,633 a year later. The first six months of 2016 show the number is likely to double again. "This is almost pure sex trafficking," says IOM spokesman Di Giacomo. The smugglers may not care what happens to their customers once they get to sea, but sex traffickers—who have roots in both Nigeria and Italy—have a vested interest in making sure their human goods make it to Italy. And they depend on rescue vessels to get the job done.

Both IOM and MSF bristle at the idea that the rescues might actually encourage more migrants to try the crossing, increasing the overall traffic to Europe. "People

in the E.U. and Italy are not simply going to let tens of thousands drown," says Soda of IOM. But Mohammad, the young Syrian on the wooden boat, says he wouldn't have taken the risk if he hadn't been reassured by recent news accounts of successful rescues. "We knew that there were people out there saving people. I believed that I had a better chance of making it."

BY THE TIME the rescue crew of the *MV Aquarius* had pulled the last person on board, the boat was filled with blanket-wrapped migrants nibbling bars of high-calorie emergency rations. It would be 36 hours before the *MV Aquarius* reached the Sicilian port city of Catania, and the seas were already getting rough. At the last port of call, the ship's logistics coordinator had put in an order for seasickness bags, but the supply company was out. He bought the next-best thing. Most of the passengers spent the journey clutching rotisserie-chicken bags to their mouths.

Rescue boats like the *MV Aquarius* are only a temporary response for what

has become the central humanitarian challenge of the 21st century. Demetrios Papademetriou, president of the Migration Policy Institute Europe, argues that tackling mass migration will require work at each level. Source countries, with international help, will need to develop more opportunities for their citizens at home. A more stable Libya must emerge, able to patrol its maritime borders, root out people smugglers and work with European partners to prosecute them.

But efforts to control mass migration that are only punitive and defensive will fail. While passengers on the wooden boat, who hailed largely from Eritrea, Syria and Somalia, are likely eligible for asylum or merit refugee status, the Senegalese, Ghanaians, Nigerians and Bangladeshis on the rubber boat know that they face a life living illegally in Europe. They simply have no alternative, says Di Giacomo of IOM. "Unless you are fleeing war and are registered as a refugee—even then it's questionable—you will have never a way to legally enter Europe. So that is why

they go to smugglers.” If Western countries open clearer legal channels for immigration, fewer migrants might choose the dangers of the Mediterranean crossing.

As the *MV Aquarius* docked in Catania, the rescued were registered, fingerprinted and sent to reception centers. Those not eligible for asylum or refugee protection are given an order by the Italian government to leave the country by their own means, though according to IOM, there is no way to enforce it. Most will look for jobs through the illegal labor market in Italy’s agricultural areas or make their way to other countries in Europe.

Nearly all those landing had little money and few language skills, but they were confident about their chances—after all, they had survived this far. Hurya, from Eritrea, plans to apply for asylum, likely in Scandinavia. Mohammad plans to join his brother in the U.K. Goodness has the phone number of a Nigerian friend of a friend—a man—who promised to help her once she arrived. She has heard such offers before and knows they are rarely genuine. Italian law guarantees protection to women who have been trafficked, but most are too ashamed to admit it and too worried about repercussions on family members back home if they don’t pay back the cost of the journey. Goodness has no skills, no schooling and no safe haven, only a fierce desire to give her baby Destiny the opportunities she never had. God, she says, “must have a plan. I just have to wait and see what it is.”

Keba, the Senegalese man who doubted the strength of his rubber boat, hopes to get a job, any job, so he can send money back to his family. Had he known what the trip entailed, he says, he never would have left home. Friends already in Europe had warned that the journey was treacherous, but he didn’t believe them. He doesn’t think those still in Senegal will heed him either. “They will come anyway,” he says. “Look, I am still alive. I endured.” Even though Keba was convinced many times on his 3,000-mile journey that he was about to die, he says he would still pass on the name and number of the smuggler who arranged his trip to friends who ask. “If there is nothing for them at home, they will have to search for it in Europe.” —*With reporting by TARA JOHN/LONDON and LYNSEY ADDARIO/ABOARD THE MV AQUARIUS*



WITH THE SUN RISING, MIGRANTS WATCH THE
COAST OF SICILY COME INTO VIEW AS THE
MV *AQUARIUS* NEARS LAND ON AUG. 23



ELECTION 2016

THE NEW POLITICS OF GUN CONTROL

Democrats are finally leaning in, while Republicans talk compromise

By Philip Elliott/Manchester, N.H.

NEW HAMPSHIRE SENATOR KELLY AYOTTE'S BIGGEST challenge stood just a few feet away from her at the rustic cottage near Concord. While Ayotte made her rounds, posing for pictures and hugging friends, retired teacher Ellen Bryan wiped sweat from her brow and described why she had not yet made up her mind about who she would vote for in November.

Bryan, 64, likes the Republican Ayotte and even said she leaned toward supporting her, but then tears welled in her eyes as she remembered the 2012 mass shooting in Newtown, Conn. She also remembered Ayotte's decision to vote against tighter gun laws in the aftermath. "I'm not a gun fan," said Bryan, a self-described military brat who grew up around guns and has family members who hunt. "There's a time and a place for everything, but there are too many guns. How can you make sure gun owners are responsible?"

New Hampshire's motto is "Live free or die," a centuries-old rallying cry for armed revolution, but these days more residents seem to prefer to live free with at least some restrictions on their weapons. Since Newtown, polls in New Hampshire have shown that a large majority of residents support universal background checks on gun purchases, which Ayotte opposed. Her Democratic challenger, Governor Maggie Hassan, twice vetoed measures to allow concealed carry in the state without a permit. Her approval ratings didn't tank, and the Republican-controlled legislature didn't override her vetoes. Now Hassan is running slightly ahead of Ayotte in recent head-to-head polls,

PHOTOGRAPH BY M. SCOTT BRAUER





cheering Democrats, who need to pick up just four seats in the U.S. Senate—and the White House—to regain control.

What is true in New Hampshire is true nationwide. Polls show about 9 out of 10 Americans support universal background checks on gun purchases and a majority support bans on high-capacity magazines. As the country becomes more urban and more diverse, some pollsters find fewer people telling them they have a gun at home than at any other point in almost 40 years. Democrats, emboldened by the data, are on the offensive. Hillary Clinton has made the fight for background checks a centerpiece of her campaign, hammering Donald Trump and vowing to take on what she calls “the gun lobby.”

Then there is the money that is flooding airwaves. “Outside groups, funded by lots of liberal outside special interests, are sort of trying to bury me,” Ayotte told the crowd near Concord. Americans for Responsible Solutions, the gun-violence-prevention group founded by attempted-assassination survivor Gabby Giffords and her husband Mark Kelly, has made New Hampshire a top priority this fall and has already spent \$2.3 million against Ayotte. A super PAC backed by former New York City mayor Michael Bloomberg, a fierce gun opponent, spent more than \$1 million against Ayotte before she even started running for re-election and is ready with more cash.

All Ayotte can do is carry on and hope her dawn-to-dusk campaign schedule can overpower the outsiders. “I am going to be myself,” she told TIME between campaign stops in Manchester on Aug. 18. “The people of New Hampshire, that’s what they expect. They want someone who is able to have a level of independence and ability to work with other people. That’s what I’ve done in the Senate.” This year that may not be enough, for her or her party.

THAT GUNS ARE even a central issue in 2016 is something of a turnaround. The last time this happened in a national election was in the wake of a 1994 assault-weapons ban that then President Bill Clinton signed into law just

◀
*The debate over regulating guns, like these
at a shooting range in Belmont, N.H., has
become a top-tier campaign issue*



56 days before the midterm elections. Gun-rights groups mounted a ferocious counter-campaign, and Democrats lost a net 54 seats in the House and eight in the Senate. Clinton said the vote on guns “devastated” his party’s majorities in 1994 and probably hurt Al Gore’s chances of winning the White House in 2000. After that, Democrats tended to look the other way when it came to gun control—or even touted their support for guns. Three weeks before the 2004 election, Democratic nominee John Kerry went duck hunting in Ohio. Hillary Clinton ran in 2008 as a champion of gun owners, attacking Barack Obama on the issue from the right.

But the political calculus has changed. Grisly mass shootings now seem commonplace in churches, workplaces and schools. Fears of lone wolves with semiautomatics seem to have grown. While gun murders are about half what they were in 1993, the statistics are little comfort in the face of such high-profile incidents.

In Ohio, Democrat Ted Strickland,

▲
New Hampshire Senator Kelly Ayotte faces a tough re-election race after opposing new gun regulations supported by families of victims of the 2012 Newtown mass shooting

once rated A+ by the National Rifle Association (NRA), decided to run for the Senate this year without the camouflage he wore in past campaigns. GOP Senator Ron Johnson of Wisconsin, who is in a tough re-election fight, now says he’s open to some concession. And Ayotte has begun to emphasize her ability to negotiate a deal on guns that would stop those on the terrorist watch list from getting weapons. Meanwhile, Pennsylvania Senator Pat Toomey, a Republican who broke with his party to champion background checks in 2013, appears to be holding his own in his re-election race, with help from some of the same outside groups attacking Ayotte.

Senator Chris Murphy, a Connecticut Democrat, says the shifts are likely to

last. Where once Democrats were told to avoid guns, they are now advised to embrace the issue as a political winner. “It’s become a litmus test for Democrats,” he told TIME over breakfast in Stamford, Conn. “You have to be strong on the issue of guns, or you are ineligible for leadership in our party.”

For gun-rights groups, the change in the mood has raised more concern than alarm. None of this changes the NRA’s resolve or its record of winning several local races and state legislative victories in recent years. “The stakes for law-abiding gun owners have never been higher,” said Jennifer Baker, a spokeswoman for the NRA’s political arm. “The 2016 election is about the fundamental right to own a firearm in your home for self-protection, a right the majority of Americans support.”

Gun-rights supporters point out that the increased background checks of private and gun-show sales that Democrats and Toomey supported would not have prevented Newtown or the ISIS-inspired murders in San Bernardino, Calif., and

an Orlando nightclub, which all involved guns purchased from gun stores with full background checks.

But political consultants say the public demand for some action short of gun confiscation remains very real, though the language candidates use can matter a great deal. Democratic pollster Anna Greenberg, who works with Giffords' group, tells clients to talk about "the gun lobby" but not the NRA, which in many voters' minds is about hunting and sport. She tells candidates to talk about closing loopholes, not about stricter gun laws. Never promise that anything is a fix-all or use the loaded phrase *gun control*.

Following this script, the Democrats devoted prime-time hours of their four-day nominating convention in Philadelphia in July to gun safety, lining up victims' families, advocates and celebrities to bemoan the atrocities committed by horrible people who should never have had access to guns. When Clinton picked Tim Kaine as her running mate earlier that month, she celebrated the fights he waged against the NRA after the Virginia Tech campus massacre in 2007. "Make no mistake, behind that smile, Tim also has a backbone of steel," Clinton said. Her advisers think guns, including support for reviving the assault-weapons ban, could help Clinton break through with female voters who are reluctant to trust her.

Republicans, meanwhile, featured more-traditional fare at their party convention in Cleveland, including a speech from Chris Cox, the top lobbyist for the NRA. Trump has met resistance to his fealty to gun backers in unlikely places. "To my friends at the NRA, I understand your concern about denying somebody the right to buy a gun," said South Carolina's Lindsey Graham at the Capitol in June. The Senator has been working with Ayotte to block suspected terrorists from buying weapons. "That's a constitutional right. But every right—whether speech or buying a weapon or any other constitutional right—has boundaries on it."

AYOTTE WAS STILL a relative newbie in the Senate when Newtown unfolded, and she took a look around her native New Hampshire and decided supporting the post-Newtown bill wasn't what her constituents had in mind when they elected her just two years earlier. Guns have been

GUNS ON THE BALLOT

Four Senate Republicans supported a bill to expand background checks to private and online gun sales. Three now face re-election fights against Democratic opponents.

PENNSYLVANIA

Pat Toomey

The Republican co-wrote the bill, which failed. Gun-violence-prevention activists, including the daughter of the Sandy Hook Elementary principal, are now running television ads to support his campaign.

Katie McGinty

The former environmental regulator has blamed Toomey for not fighting harder for the measure, which made him few gun-rights friends. Her fortunes may depend on Hillary Clinton's campaign machine.

ILLINOIS

Mark Kirk

The Illinois Republican has shown a shrewd ability to represent his Democratic state, including violence-ravaged Chicago. Gabby Giffords' group is backing Kirk as a nod to his vote with Toomey.

Tammy Duckworth

The House member and Iraq War veteran has been a strong supporter of gun regulations. Shortly after Newtown, she invited the mother of a slain Chicago teen to join her for the State of the Union.

ARIZONA

John McCain

The former Republican presidential nominee said on the Senate floor that expanded background checks were reasonable and constitutional. He won a tough primary fight despite protests from conservatives.

Ann Kirkpatrick

A gun owner and former prosecutor, McCain's challenger has pushed for stronger background checks and better research on gun violence. She also says safety and the Second Amendment can coexist.

as much a part of New Hampshire's DNA as maple syrup, Dunkin' Donuts and ice cream socials on the town green.

But the state's demographics have changed as refugees from Massachusetts and others not steeped in Granite State traditions have moved in. Everywhere Ayotte, a former state attorney general, went, she faced tough questions on guns. Giffords showed up in New Hampshire to push stricter gun laws. The daughter

of the Sandy Hook Elementary principal confronted Ayotte at a town-hall-style meeting. Ayotte felt things shifting under her, and she wasn't wrong.

That's left Ayotte little room to pivot, but she's trying. She tells constituents that there are two pieces to any gun legislation she supports: keeping guns out of the wrong hands and protecting the rights of well-behaved Americans. She maintains that the 2013 bill she opposed would have created federal overreach by eliminating a loophole for private sales at gun shows, but she could support banning gun sales to the roughly 1,700 Americans who get extra scrutiny when they try to take commercial flights. The Orlando shooter was on that list for 10 months.

Even this tiny shift has caused some problems for Ayotte. "She came across as a big conservative for New Hampshire," 73-year-old Goffstown retiree Roger Sheehy said before an event for Republican VP nominee Mike Pence that Ayotte skipped. "That lasted half a year. Now she's doing everything with Jeanne Shaheen," Sheehy added, invoking New Hampshire's other Senator, a Democrat. "Has she forgotten that this is a guns state?" As during Ayotte's 2010 race, the NRA is not spending money to help her.

Meanwhile her rival, Hassan, has been unforgiving. "When it comes down to gun safety, she has had more than one opportunity to vote for bipartisan legislation," Hassan told TIME during an Aug. 19 interview in her second-floor office in the state capitol. "She has been standing with her party and the gun lobby on this repeatedly."

Listening to Ayotte, it's obvious she struggles to do right by her divided constituents. She is no absolutist on guns, especially after the years she spent as a state prosecutor who met with victims' families and sent their attackers to jail. So she is positioning herself as a potential dealmaker. "No matter who wins the presidency and who wins the Senate, you still need both parties, generally, to get things done," she says. "You're going to need people who are problem solvers and bridge builders." Which means whatever the outcome in November, the people of New Hampshire will be sending a unexpected message on guns from the floor of the U.S. Senate in 2017. —With reporting by SAM FRIZZELL/ WASHINGTON □

FROM THE EDITORS OF GOLF.COM

GOLD





WHERE
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GAME
MEETS
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THE NEW SCIENCE



ABOUT THE ART To illustrate the new science of exercise, we updated classic fitness photos from our archives. These high-speed, multiple-exposure images were taken by LIFE photographer **Gjon Mili** in 1942 and 1962. Contemporary Swedish artist **Sanna Dullaway** digitally colorized them to give them fresh life. For more, visit time.com/exercise

CE OF EXERCISE

Doctors, researchers, scientists—even ancient philosophers—have long claimed exercise works like a miracle drug. Now they have proof

By Mandy Oaklander



Ever since high school, Dr. Mark Tarnopolsky has blurred the line between jock and nerd. After working out every morning and doing 200 push-ups, he runs three miles to his lab at McMaster University in Ontario. When he was younger, Tarnopolsky dreamed of becoming a gym teacher. But now, in his backup career as a genetic metabolic neurologist, he's determined to prove that exercise can be used as medicine for even the sickest patients.

"People would always say to me, 'Exercise? Come on. Scientifically, you can't come up with a mechanism, so it's a complete waste of time,'" Tarnopolsky says. "But as time goes on, paper after paper after paper shows that the most effective, potent way that we can improve quality of life and duration of life is exercise."

Tarnopolsky has published some of those papers himself. In 2011, he and a team studied mice with a terrible genetic disease that caused them to age prematurely. Over the course of five months, half of the mice were sedentary. The other half were coaxed to run three times a week on a miniature treadmill.

By the end of the study, the sedentary mice were barely hanging on. The fur that had yet to fall out had grown

coarse and gray, muscles shriveled, hearts weakened, skin thinned—even the mice's hearing got worse. "They were shivering in the corner, about to die," Tarnopolsky says.

But the group of mice that exercised, genetically compromised though they were, were nearly indistinguishable from healthy mice. Their coats were sleek and black, they ran around their cages, they could even reproduce. "We almost completely prevented the premature aging in the animals," Tarnopolsky says.

That's remarkable news, if you're a mouse. And though there are obvious differences between rodents and humans, Tarnopolsky has seen something similar happen in his ill patients. "I've seen all the hype about

gene therapy for people with genetic disease"—Tarnopolsky treats kids with severe genetic diseases like muscular dystrophy—"but it hasn't delivered in the 25 years I've been doing this," he says. "The most effective therapy available to my patients right now is exercise."

Tarnopolsky now thinks he knows why. In studies where blood is drawn immediately after people exercised, researchers have found that many positive changes occur throughout the body during and right after a workout. "Going for a run is going to improve your skin health, your eye health, your gonadal health," he says. "It's unbelievable." If there were a drug that could do for human health everything that exercise can, it would likely be the most valuable pharmaceutical ever developed.

The trouble is only 20% of Americans get the recommended 150 minutes of strength and cardiovascular physical activity per week, more than half of all baby boomers report doing no exercise whatsoever, and 80.2 million Americans over age 6 are entirely inactive.

The consequences of a sedentary life are as well documented as they are dire. People with low levels of physical activity are at higher risk for many different kinds of cancer, heart disease, Alzheimer's disease and early death by any cause. That's at the end of life. Long before that, inactivity can worsen arthritis symptoms, increase lower-back pain and lead to depression and anxiety—not to mention cause a sallow complexion.

Despite public-awareness campaigns, the health benefits of exercise have not been effectively communicated to the average American. Humans are notoriously bad at assessing the long-term benefits—and risks—of their lifestyle choices. And vague promises that exercise is "good for you" or even "good for the heart" aren't powerful enough to motivate most people to do something they think of as a chore. Humans are, however, motivated by rewards. That is why experts like Tarnopolsky are so focused on proving that the scientific benefits of exercise—slower aging, better mood, less chronic pain, stronger vision, the list goes on—are real, measurable and almost immediate.

The U.S. National Institutes of Health (NIH) is on the bandwagon too. Next year

the agency will launch a massive new study with the aim of documenting in unprecedented detail exactly what happens inside a body in motion. Its hope: to prove that exercise is medicine.

BEFORE DOCTORS ADOPTED a single-minded focus on treating and curing diseases, their main goal was to keep people healthy. Even back in 400 B.C., doctors knew that diet and exercise were the best ways to do that. “Eating alone will not keep a man well,” Hippocrates famously wrote. “He must also take exercise.” For millennia, doctors were the vanguards of physical education—the original PE teachers.

But in the early 1900s, with the rise of modern surgery and nascent pharmaceuticals, medicine shifted its focus from the prevention of disease to its treatment. Paradoxically, physicians de-emphasized exercise just as the modern Olympics swelled in popularity and colleges began building campus stadiums to accommodate America’s growing love of spectator sports. The authors of a paper published in a 1905 issue of the *Journal of the American Medical Association* mourned how many people were losing sight of the health benefits of exercise. “The men on the teams are the very ones whom Nature has endowed superabundantly with physical capacity, but on them the physical director bends most of his energies,” they wrote, “while the average student is left to get his physical development by yelling from the bleachers.”


Physical activity was no longer the medicine of the masses but the privilege of elite athletes. When scientists studied exercise, it was to figure out how athletes could improve their peak performance—not how mere mortals could improve their health day to day. This gap persists. At a time when boutique (read: expensive) fitness studios are more popular than ever, fewer people are getting the minimum recommended amount of exercise.

Worse, many U.S. schools have seen gym classes cut from the curriculum; nearly half of high school students don’t have weekly PE class, and only 15% of elementary schools require PE at least three days a week for the school year. The result: the majority of American kids and adolescents have so-called exercise-deficit disorder. Meanwhile, childhood-



EXERCISE BASICS, EXPLAINED

Incorporating exercise into your week doesn’t have to be complicated. Here are some common exercise questions, answered.



How much exercise do I really need to be doing?

The World Health Organization and the U.S. Centers for Disease Control and Prevention advise most adults to do 150 minutes of moderate-intensity aerobic physical activity each week and twice-weekly muscle strengthening.




What counts as moderate-intensity exercise?

Everything you think of as exercise—plus lots of stuff you don’t, including brisk walking, playing with the kids, walking the dog, carrying heavy groceries or gardening. Do at least 10 minutes at a time, and break it up however you want.



Is high-intensity interval training as good as regular exercise?

More research is needed, but evidence suggests that short, all-out bursts of exercise bring unique benefits. They’re also a great option for the time-crunched. New research shows that as long as you go hard, intervals are just as effective as longer workouts, even for people with some chronic diseases.



I hate lifting weights. Can I just do cardio?

Sorry, but if your goal is to live longer and healthier, you should do both, because they offer different benefits.

Cardio will prevent you from being winded after climbing stairs, while strength training will build muscle and bone, which protects against injury.

obesity rates have climbed every year since 1999. “You have whole generations that are soured on exercise,” says Jack Berryman, professor emeritus of medical history at the University of Washington School of Medicine.

Researchers like Tarnopolsky and Marcos Bamman, an exercise physiologist who also wants to be part of the NIH study, are hoping that their work will begin reversing those trends. Next year the NIH will launch its six-year, \$170 million study with a group of about 3,000 sedentary people, ranging in age from children to the elderly. They will start an exercise program and then donate blood, fat and muscle before and after they exercise. Scientists will then examine samples for clues to how the body changes with physical activity. A control group that doesn’t exercise will also be tracked for comparison.

As part of the study, researchers will do the same experiment in animals to get tissue samples from places like the brain and the lungs that would be too dangerous to obtain from humans. “It’ll be a tremendously enormous data set,” says Maren Laughlin, program director for integrative metabolism at the NIH, who is also a lead on the new study. In the end, the researchers think they’ll be able to identify every single molecule in the body that’s tweaked or turned on by exercise.

This kind of study—its size, its rigor, its aims—is a first, and experts are hoping it will give doctors the evidence they need to start treating exercise like the miracle drug they’ve long thought it to be. “If you think of exercise as a true form of medicine, which it is, it’s not good enough to just look at a patient and say, ‘You need to do more exercise,’” says Bamman, director of the Center for Exercise Medicine at the University of Alabama at Birmingham. “That’s no better than handing someone a bottle of pills and saying, ‘Here, take a few,’” with no other explanation.

Bamman is betting that with this new data, exercise will one day be prescribed to patients. Instead of leaving the doctor’s office with nothing but a slip of paper with a drug name scrawled on it, patients may also get a detailed exercise plan tailored to make their medication work better. “We think that precision

will go a long way in changing behavior,” Bamman says. “We’re at a really important time in the field.”

THINK OF ALL the different ways you can sweat and you might be surprised that each falls into one of just two categories. You’re doing aerobic exercise when your breathing speeds up, your blood flows faster and your heart pumps more of it, shooting oxygen out to the tissues in the rest of the body. It’s the most popular kind; about half of Americans meet the recommendations for aerobic physical activity. But only 20% also do the other type, strength training. The phrase may conjure grunting weight lifters and gym dumbbells slick with sweat, but to build muscle and strengthen bones, you really only need to use your body weight as resistance, says Anthony Hackney, an exercise physiologist at the University of North Carolina at Chapel Hill. That’s why things like yoga, tai chi and Pilates—not just pumping iron—are excellent forms of strength training. “People always get the image of the big, muscular guy,” Hackney says. “We try to think of muscle strength and power as a 65-year-old lady picking up a gallon of milk, pouring a glass and feeling comfortable.”

In addition to the heart, muscles, lungs and bones, scientists are finding that another major beneficiary of exercise might be the brain. Recent research links exercise to less depression, better memory and quicker learning. Studies also suggest that exercise is, as of now, the best way to prevent or delay the onset of Alzheimer’s, which is second only to

cancer as the disease Americans fear most, according to surveys.

Scientists don’t know exactly why exercise changes the structure and function of the brain for the better, but it’s an area of active research. So far, they’ve found that exercise improves blood flow to the brain, feeding the growth of new blood vessels and even new brain cells, courtesy of the protein BDNF, short for brain-derived neurotrophic factor. BDNF triggers the growth of new neurons and helps repair and protect brain cells from degeneration. “I always tell people that exercise is regenerative medicine—restoring and repairing and basically fixing things that are broken,” Bamman says.

Repairs like this throughout the body may be the reason exercise has been shown to extend life span by as much as five years. A small new study suggests that moderate-intensity exercise may slow down the aging of cells. As humans get older and their cells divide over and over again, their telomeres—the protective caps on the end of chromosomes—get shorter. To see how exercise affects telomeres, researchers took a muscle biopsy and blood samples from 10 healthy people before and after a 45-minute ride on a stationary bicycle. They found that exercise increased levels of a molecule that protects telomeres, ultimately slowing how quickly they shorten over time. Exercise, then, appears to slow aging at the cellular level.

For all its merits, however, exercise is not an effective way to lose weight, research has shown. In a cruel twist, many people actually gain weight after they start exercising, whether from new muscle mass or a fired-up appetite. “Some people say exercise doesn’t do anything,” says researcher John Jakicic of the University of Pittsburgh. “Well, exercise does a lot. It just may not show up on the scale.”

ONE OF THE BEST PIECES of news is that so much of what we already do counts as physical activity. “Mowing the grass, raking leaves, washing the car—all that’s exercise,” says Berryman, the exercise historian. “Physical activity includes all movement, not just throwing a ball through a basket.”

What’s more, emerging research suggests that it doesn’t take much movement to get the benefits. “We’ve been

interested in the question of, How low can you go?” says Martin Gibala, an exercise physiologist at McMaster University. After all, if it were possible to reap all the health benefits of exercise in a tiny fraction of the time, who wouldn’t be compelled to give it a try?

Gibala wanted to test how efficient and effective a 10-minute workout could be, compared with the standard 50-minutes-at-a-time approach. The micro-workout he devised consists of three exhausting 20-second bouts of all-out, hard-as-you-can exercise, followed by brief recoveries. In a three-month study, he pitted the short workout against the standard one to see which was better.

To his amazement, the workouts resulted in identical improvements in heart function and blood-sugar control, even though one workout was five times longer than the other. “If you’re willing and able to push hard, you can get away with surprisingly little exercise,” Gibala says.

Not everyone can—or wants to—do this kind of excruciating workout, often referred to as high-intensity interval training, or HIIT. Many of us would gladly bounce around in Zumba class for an hour to avoid enduring even a minute of HIIT torture. But considering that a lack of time is the No. 1 reason people say they don’t exercise, a workout far shorter than what’s generally recommended could be a strong motivator. Gibala, for his part, is wondering if the workout can get even shorter. He’s even played around with the idea of a one-minute workout.

Not every type of exercise will work for every person, of course, but a growing body of research indicates that very vigorous exercise—like the interval workouts Gibala is studying—is, in fact, appropriate for people with different chronic conditions, from Type 2 diabetes to heart failure. That’s new thinking, because for decades, people with certain diseases and even pregnant women were advised not to exercise. Now scientists know that far more people can and should exercise. A recent analysis of more than 300 clinical trials discovered that for people recovering from a stroke, for instance, exercise was even more effective at helping them rehabilitate.

Dr. Robert Sallis, a family physician who runs a sports-medicine fellowship at Kaiser Permanente Fontana Medical

If you’re able to push hard, you can get away with surprisingly little exercise.’

MARTIN GIBALA,
McMaster University
exercise physiologist

Increased blood flow to the brain creates new blood vessels. Exercise also triggers the release of chemicals that dull pain and lighten mood. ▶



Moving quickly makes the heart pump more blood to the body's tissues, including the muscles. That extra oxygen helps muscles better withstand fatigue. ▶



Exercise may protect telomeres, the tiny caps on the ends of chromosomes. This appears to slow the aging of cells. ▼



▶ The body is better able to burn fat for energy instead of carbs, causing fat cells to shrink.

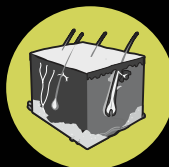


Repeated weight-bearing contractions make muscles grow and put pressure on the bones, increasing their density. ▼



YOUR BODY ON EXERCISE

Everyone knows exercise is healthy. Now scientists are understanding exactly why. Here are some of the amazing things that happen to a body in motion.



◀ Exercise revs up blood flow to the skin, delivering nutrients to the epidermis and helping wounds heal faster.

Center in California, has prescribed exercise to his patients since the early 1990s in hopes of doling out less medication. “It really worked amazingly, particularly in my very sickest patients,” he says. “If I could get them to do it on a regular basis—even just walking, anything that got their heart rate up a bit—I would see dramatic improvements in their chronic disease, not to mention all of these other things like depression, anxiety, mood and energy levels.”

Older people, too, can benefit from strenuous exercise. Until now, all the recommendations for increasing bone density have included low-repetition, high-weight types of training, says Jinger Gottschall, associate professor of kinesiology at Penn State University. “But this just isn’t feasible for a lot of people. You can’t picture your grandma going in and doing that.” Luckily for Grandma, Gottschall’s team found that lifting lighter weights for more reps improves bone density in key parts of the body, making it a good alternative to heavy lifting.

It’s becoming evident that nearly everyone—young, old, pregnant, ill—benefits from exercise. And as scientists learn more about why that is, they’re hoping that those early 20th century missteps—the move away from our being bodies in motion—will be reversed. They’re also hoping that the messaging around exercise gets simpler. “People think now, because of the health-club and fitness movement, that in order to exercise you need to join a fancy club and wear fancy clothes,” says Berryman. In fact, some of the best exercise, research is showing, doesn’t require a gym membership at all (*see right*).

Back at McMaster University, Tarnopolsky and his team are almost finished doing autopsies on mice from their new study, and even though the scalpel-wielding scientists are blind to which groups the mice were in, they can tell with certainty which animals were allowed to exercise and which were sedentary. “You open up the sedentary mice and there’s fat all over the place,” he says. About half of those mice have tumors. “They just look god-awful.”

As for the mice who hit the wheel every day? “We haven’t found a single tumor,” he says. “I think if people saw, they’d be pretty motivated to exercise.” ■

HOW TO FIND YOUR BEST, MOST UNFUSSY WORKOUT

Experts recommend that everyone get a mix of cardio and strength training, neither of which requires a pricey gym membership. Here are six simple workouts with proven health benefits.

CARDIO



Walking

With the lowest quit rate of any type of exercise, walking improves memory, well-being, heart health and even creativity.



Cycling

Cycling has been shown to increase brain connectivity, and doing it at any intensity improves a depressed mood.



Running

Going for a run improves sleep and makes bones stronger. Even just a bit of jogging—5 to 10 minutes a day—is linked to a longer life.

STRENGTH



Yoga

Lift your own body weight and flow through intense poses, and yoga will give you strength with a side of mindfulness and stress relief.



Weight training

A cheap pair of weights will build muscle and strengthen bone at any age. As an alternative, try resistance bands.



Tai chi

These slow, gentle movements might not look like much, but tai chi strengthens the back, abs and upper and lower body. It also relieves pain.

WAIT ... THAT’S EXERCISE?

100

Number of extra calories per day a person can burn just by doing more active things like taking the stairs, fidgeting, singing and laughing

Heavy **gardening**, like digging and raking, counts as vigorous physical activity.

Doing **housework** a few times a week can reduce your risk of heart disease and stroke.

Standing more and sitting less is linked to a lower risk of cancer, diabetes and early death from any cause.

30%

The percentage by which people who move a lot during the day reduce their risk of early death—regardless of how much they exercise



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*The Simonopetra
Monastery sits
above the Aegean
Sea on the Mount
Athos peninsula*

PHOTOGRAPHS BY
YURI KOZYREV FOR TIME

Putin's Pilgrimage

With visits to one of Greece's holiest places, the Russian President casts himself as protector of the faith

By Simon Shuster/Athos, Greece



In the logbook of Vladimir Putin's travels, one destination has stood out over the years for attracting a curious share of the Russian President's attention.

It is a tiny peninsula, about one-tenth the size of Long Island, that juts out of northern Greece into the Aegean Sea. Known as the Holy Mountain of Athos, it has been governed by Orthodox Christian monks ever since the Byzantine Empire first granted them sovereignty over this spit of land at the end of the 9th century.

Today it still stands as a giant shrine to the Virgin Mary, and thousands of pilgrims travel there each year. But it is hardly prominent on the political map of the world. No women are permitted to visit. No banks are allowed to operate there. No drivable roads connect Mount Athos to mainland Greece, and the only way to get there is by boat or helicopter. Yet Putin has made a total of four attempts to reach it during his 16 years in power.

His first two journeys failed. In 2001, during the second year of his presidency, a gale over the Aegean kept his helicopter from taking off. Three years later, he was forced to turn back by a hostage crisis at a school in the small Russian town of Beslan. But when he finally made it to Athos in 2005, Putin established a bond with the monks that has transformed not only their community but also the Russian elites back in Moscow. Partly through that relationship, the Kremlin has come to embrace the Orthodox faith and to harness it, as both an ideology and a source of influence abroad. “For us, Orthodoxy is the axis of the Russian world we seek to build,” Alexander Dugin, one of the Kremlin’s favored ideologues, told me after joining Putin on another pilgrimage to the Holy Mountain at the end of May. “If you want to understand the Orthodox world as we see it, understanding Athos is the place to start.”

It’s also key to understanding Putinism. In the West, most efforts to grasp the actions of the Russian President—such as the military incursion he ordered into Ukraine in 2014, the bombing campaign he began over Syria last year and the general vilification of the West that permeates many of his speeches and policies—tend to look for answers in the legacies of the Cold War. But Putin’s strategic vision has roots in an even earlier era, one in which czars and priests, not communist apparatchiks, defined Russia’s role in the world. Through his visits to Mount Athos, Putin has evoked that era of Russian imperial power, signaling how central it is to the legacy he wants to build.

FEW MEN ARE BETTER POSITIONED to explain this legacy than Dugin, the leading theorist of Russian imperialism and the reputed id to the collective conscience of the Kremlin’s militant wing. Prone to dressing all in black, with a beard that hangs to his chest and the rhetorical style of a doomsayer, Dugin can seem like a figure pulled from the pages of *Crime and Punishment* or, for that matter, from the monastic cells of Mount Athos. But he’s very much a man of this world. The 24-hour cable-news network that he runs out of Moscow, Tsargrad, is just one of the outlets he uses to spread his ideas of Russian militarism. With a potent mix of conspiracy theory and prophecy, he has argued that Russia must form a new Eurasian empire based on the “fundamental principle of the common enemy”—by which he means the U.S. and its European allies—“and the refusal to allow liberal values to dominate us.”



His writings have often foreshadowed the next direction in Russian politics. In February, for instance, Dugin embraced the candidacy of Donald Trump while most observers in Russia were still laughing at the would-be Republican nominee. “It is he who makes people feel fresh and hopeful,” Dugin said of Trump at the time, adding that the candidate was a “sensation” that represented the “real America.” A few months later,

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U.S. officials and cybersecurity experts accused Russia of trying to help Trump by hacking and leaking the emails of his rivals in the Democratic Party. The Kremlin denied any involvement in that breach. But Dugin was adamant that any help for Trump would benefit Russia, as his presidency would mark “the end of the epoch of American imperialism.”

In much the same way, Dugin called for the Russian conquest of Ukraine almost

Putin, who has positioned himself as the protector of Orthodox Christianity, stands next to monks and Greek President Prokopis Pavlopoulos at Mount Athos

two decades before the actual invasion. His advocacy for that war, and his recruitment of paramilitaries to fight in eastern Ukraine, led the U.S. government to impose a travel ban on Dugin, and when he arrived in Greece as part of Putin’s retinue in May, police pulled him out of the passport line at the airport. “Some European officials had flagged me as an undesirable,” Dugin later explained. But after he’d spent a night in detention, the

authorities allowed him to drive to the remote spot in northern Greece where the Holy Mountain of Athos begins.

It is not an easy place to reach. Although its territory is part of Europe's visa-free travel zone, a stone wall topped with barbed wire blocks the neck of the peninsula. "Crossing this border is illegal," declares a sign behind the wall. "Violators will be prosecuted." In order to enter Mount Athos, visitors must obtain a special visa and an invitation from the governing monks—a privilege seldom granted to those from countries outside of what Dugin calls "the Orthodox world." That world would include countries in eastern and southern Europe where the dominant religion is Orthodoxy, as well as smaller communities of the Orthodox faithful in North Africa, the Middle East and elsewhere. Together they number some 260 million around the world, though relatively few live in America. So when the official at the Athos pilgrimage bureau saw my U.S. passport, he handed the document to his superior. "What is your religion?" the boss asked. On my mother's side, there is some Orthodox Russian blood, which seemed enough to secure me a *diamonitirion*, the visitor's permit that comes stamped with an image of the Virgin Mary.

From the Greek port of Ouranoupolis, the ferry takes about two hours to reach the port of the Holy Mountain, docking along the way at several of the monasteries that sit along the shore. Twenty of them dot this peninsula—17 of them Greek, one Serbian, one Bulgarian and one Russian, each representing one of the traditional branches, or patriarchates, of the Orthodox faith. From a distance, the monasteries look like medieval castles, bare fortresses of stone that exude the same austerity as the gaunt and bearded monks who live inside.

The one exception is St. Panteleimon, better known as the Russian monastery, which looks more like a freshly renovated luxury resort. Painted in teal, with gilded crosses rising from its onion domes, St. Panteleimon has been rebuilt over the past 10 years with generous funding from Russian billionaires and the Kremlin. It now dwarfs most of the Greek monasteries in the area, and Putin drew attention to its symbolism when he arrived on Mount Athos on May 28. "For more



than a thousand years," he told the ruling council of monks that day, "our spiritual traditions and common values have been nurtured and begotten here." Later in his speech, he added, "Today, as we restore the values of patriotism, historical memory and traditional culture, we are seeking firmer bonds with Mount Athos."

In many ways, those bonds hark back to what Athos was like during the twilight of the czarist era. At the end of the

19th century, the Russian imperial court purchased land on and around Mount Athos in order to bolster its claim to being the global guardian of Orthodoxy. It also sent so many Russian monks to live on the Holy Mountain that they came to outnumber all the others by nearly 2 to 1. "The Russians wanted to occupy Mount Athos back then," says Father Makarios, a Greek monk whose absolutions from sins are highly prized among pilgrims. So in



a sense, he says, the fall of the czars in the Bolshevik Revolution of 1917 saved this part of Greece from turning into a de facto Russian colony. The communists, who imposed a policy of atheism across the Soviet Union, weren't interested in faith-based diplomacy. So the Russian support for Mount Athos gradually died away, as did the Russian monks left over from the czarist era. Only in the past decade has that patronage come roar-

Clockwise from top left: Monks and aides mingle at the Protaton; Father Makarios, center, after prayers; Father Pavel, a Russian Orthodox monk; monks head to dinner

ing back. "To say the truth, Mount Athos again lives with Russian money now," Father Makarios says.

THE VALUE of that investment starts to make sense when you look at the demographics in Russia's neighborhood. In the parts of Eastern Europe that Moscow still sees as its rightful zone of influence—including Georgia, Belarus, Armenia and Ukraine as well as the former Yugoslav republics of Serbia, Macedonia and Montenegro—the majority of people are Orthodox Christians. By paying homage to one of the holiest places in the Orthodox world, Putin is trying to cast himself as the protector of the faith—a role that traces back to a core problem of Russian power in the post-Soviet era. With the fall of communism, Moscow suddenly found itself lacking a "national idea"—an ideology that could replace the discredited slogans of Lenin and Marx and, ideally, entice the East European nations that Russia sought to keep under its wing.

Orthodox Christianity fitted the bill nicely. With its claim to being the one true faith and its opposition to the encroachments of Western liberalism—especially when it comes to gay rights and same-sex marriage—it offered an international base of support among conservatives and an ideological backdrop to Putin's self-image as a counterweight to the decadent West. "For us Orthodoxy is the necessary and predominant element of our national idea," Dugin told me. "It is the core."

It also offers political advantages. Orthodox Christianity is the predominant faith in the E.U. member states Bulgaria, Romania, Cyprus and Greece, all of which have the right to veto the sanctions that the E.U. has imposed on Russia for its incursions into Ukraine. By visiting Greece, Putin played on those bonds of faith to win over allies in Europe, whom he now needs more than ever. Because of a sharp drop in the price of oil, the Russian economy shrank by 3.7% last year, and it could face an all-out crisis unless the West agrees to lift its sanctions. For that to happen, at least one E.U. member state would have to veto them when they come up for a vote in January, and Greece seems like the safest bet. Not only has its left-wing government pledged to oppose the isolation of Russia, but its citizens

are also remarkably sympathetic to the Kremlin. More than a third of Greeks (35%) expressed approval for Russia's leaders in a recent Gallup poll, more than in any other E.U. member.

The politics of Orthodoxy has also served Putin well at home, especially in terms of discrediting the opposition. Soon after he decided to return for a third term as President in 2011, a revolt broke out against him within the Russian elite, whose more liberal wing wanted Putin and his fellow hard-liners to cede the Kremlin to a Westernizer. As the dissent grew and Putin's popularity plummeted, he called on the monks of Mount Athos for support.

That November, one of the Greek elders of the Holy Mountain, Father Ephraim of the Vatopedi monastery, loaded one of its holiest relics onto a chartered airplane and flew it to Russia. Among the Orthodox, that relic is believed to be a belt that the Virgin Mary sewed for herself out of camel hair. It traveled through Russia for 39 days, allowing more than 3 million worshippers to bow before it and cross themselves. Among the first was Putin, who went to meet Father Ephraim at the airport.

On state TV, the images had a powerful effect, revealing the pious millions willing to rally around a religious icon—and a shared identity—that Putin helped bring to Russia. But it did not stamp out the revolt against him. Later that winter, protesters rallied around the country to call for his resignation, and Putin again turned

to the Orthodox Church for support.

His opportunity came in the form of a performance-art collective called Pussy Riot, whose members barged into a Moscow cathedral in February 2012 and performed a crude song that called for the Virgin Mary to “chase Putin away.” Three of them were arrested and charged with felony hooliganism, setting in motion a show trial that cast the protest movement as an attack on Russia's religious values. “It provided this really convenient peg for the regime to drive a wedge into the opposition and then control it,” says Geraldine Fagan, an academic who authored *Believing in Russia*, a book about the rise of piety in the ruins of Soviet atheism. “Given the symbolic importance of the church, it allowed the state to depict anything in favor of democratic accountability as some nefarious Western influence.”

It worked. The protests died down, and Putin soon began to apply the same religious rhetoric to his foreign policy. After the annexation of Crimea in 2014, the President declared in his state-of-the-nation address that Russia had taken back a land of “sacred importance.” The Black Sea peninsula, he pointed out, was where his namesake St. Vladimir the Great, the pagan ruler of ancient Russia, was baptized after converting to Orthodox Christianity in the 10th century. The Orthodox faith had always been vital to the formation of a Russian state, he said, out of the “various tribes and tribal unions of the vast Eastern Slavic world.”

The same notions came up again last

fall, when Putin ordered Russian warplanes into Syria in what he described as an effort to protect that country's Christian minority. To shore up that narrative, Putin even dispatched the leader of the Russian Orthodox Church, Patriarch Kirill, to meet with Pope Francis in February. It was the first time an Orthodox Patriarch and a Catholic Pope had met since the two churches split in the year 1054, and it nearly caused a mutiny among the hard-liners within the Orthodox clergy.

But the political dividends for Putin were enormous. In their joint declaration, the leaders of the two biggest Christian churches in the world urged the international community to stop the “massive exodus” of Christians from Syria and Iraq. “Politically this showed that Russia is hardly in isolation,” says Sergei Chapnin, a religious scholar who edited the official journal of the Russian Orthodox Church until late last year. “It also demonstrated the importance of Russia to the world as a defender of Christians everywhere.”

AFTER I'D SPENT A FEW DAYS speaking with monks on Mount Athos, it became clear to me how eager they are to embrace this vision of Russia's role in the world. Some of them do question whether, deep down, Putin's faith could be genuine. His years of service in the Soviet KGB, which carried out the communist policy of atheism by sending thousands of priests to the Gulag, are not forgiven lightly. “There's no such thing as ex-KGB,” one Russian monk, Father Ioannikiy, grumbled as he drove me around the zigzagging roads of Athos in his old pickup truck. “Each man has to answer for his sins.”

But among the more senior clergy, Putin is often regarded as a gift from God and potentially a saint in the making. Not since the age of the czars has a leader of such global significance—endowed with nuclear weapons and a permanent seat on the U.N. Security Council—displayed such avid devotion to the Orthodox faith. The effect was almost intoxicating for many of the church's followers, who have begun to saddle Putin with their hopes for an era of Orthodox revival.

“He is the model of an Orthodox leader,” says Father Nektarios, an elder monk on Mount Athos from the Greek monastery of Karakallou. In many ways,



566 MILLION

Christians in Europe

262 MILLION

of them are Catholic

200 MILLION

are Orthodox

SOURCES:
CIA WORLD FACTBOOK;
PEW RESEARCH CENTER



A men's choir sings during the liturgy inside the main church of the Greek monastery of Vatopedi

he told me, Putin's fate is similar to that of St. Constantine the Great, the first Roman emperor to convert to Christianity in the 4th century. "Putin also comes from a pagan nation that persecuted Christians," says Father Nektarios, referring to the Soviet Union. "And through his entry into the church, he is returning the cross to its rightful place."

That process feels like a vindication to Orthodox believers well beyond the shores of Athos. Among the members of Putin's circle, there was always a small but influential group that showed devotion to the Orthodox faith. Some of them, like Dugin, became political theorists who lobbied for Russia to embrace its imperial destiny. Others held high posts in the military or security services. Still others were billionaires and industrialists, and over time they came to form what Dugin calls the Athos Club, a Kremlin clan that now dominates large parts of the

Russian economy and the political elite.

One example is Yuri Chaika, Putin's long-serving prosecutor general, who has said he often goes to Athos to "recharge his spiritual batteries." His son, the businessman Artem Chaika, recently bought into a massive luxury resort a short drive from Athos. Another politically connected billionaire, Andrey Guryev, paid for the restoration of several pilgrimage sites on the Holy Mountain. "Everybody around here gets what he has from the Russians," Father Simeon, the abbot of Xilurgu, told me one day in its newly renovated courtyard. "Everybody!"

With all that support, the monks were all too glad to return the favor when Putin arrived to see them. Emerging from his

black Mercedes SUV into the hot sun of early summer, the President was shown into the Protaton, the oldest and holiest church on Mount Athos. Near the altar, one monk bowed to kiss his hand while another gestured for him to take a gilded stall resting atop a red-carpeted pedestal.

In its breathless live blog of the event, Dugin's news agency informed readers that Putin had taken "the throne where only Byzantine emperors sat in the past." In fact, that gilded stall may not have been reserved exclusively for heads of empires; senior bishops have been allowed to occupy it in the past. But it looked regal enough for Putin to hesitate as he approached it, as though unsure whether he was worthy. The monks assured him that he was. And as he listened to their fawning speeches beneath the frescoes of Orthodox saints, the President leaned back and relaxed. He seemed to feel right at home. □



Evan, who stopped his hormone treatments before trying to get pregnant, chest-feeds his son in their Massachusetts home



Society

My brother
Evan was
born female.
He came
out as
transgender
16 years ago
but never
stopped
wanting to
have a baby.

**This spring
he gave
birth to his
first child**

By Jessi Hempel

PHOTOGRAPHS BY
ELINOR CARUCCI
FOR TIME

When the call came, my brother was at work in the open office in Cambridge, Mass., he shares with seven colleagues who, like him, help run clinical trials for a drug developer. The phone number came up blocked, so he knew it must be the doctor. He stood up, unsteady on his feet. Was he a little nauseous? Or was that just adrenaline? He ducked into the hallway in search of quiet.

My brother Evan, 35, is a stocky guy of medium height with a trimmed, fuzzy blond beard and two gem studs in each earlobe. He usually wears a Red Sox hat, and when he's nervous, he'll remove it and obsessively bend the rim. But on that September afternoon, both of his hands were clutching his phone, the right one cupping the left for privacy. "Hello?"

"This is Dr. Kowalik," said the voice. The identification was unnecessary. Ania Kowalik is a reproductive endocrinologist at a clinic called Fertility Solutions in Dedham, Mass. They'd spoken regularly for more than six months. Evan, who was born female, had wanted to be a parent since he was very young, when he played with dolls just a bit longer than the other kids. He'd helped pay for college by nannying triplets. And when he first came out to friends as transgender at 19, changing his name and beginning his long physical transformation, he didn't stop adding to the list of baby names in the back of his journal: Kaya, Eleanor, Huxley.

Evan knew he should feel excited. But instead, he felt a chill of anxiety and anticipation. He'd wanted this for so long, he later told me, and had been close to getting it. Then, four months earlier, he'd miscarried after Kowalik told him she couldn't find a heartbeat during his first ultrasound.

She was brief: Evan was pregnant. Kowalik told him he had low levels of progesterone, a hormone that helps maintain a healthy pregnancy, and prescribed some pills for him to start taking

right away. "Congratulations," she said after a pause. "This is a good start."

Evan isn't sure how long he stood in the hallway after the call. People from other offices brushed by him, caught up in their work. He called his partner, and her gasp was loud enough that Evan held the phone away from his ear momentarily. He pulled up a calculator to figure out his due date.

I'd have no reason to tell you about this moment in my brother's life were it not for the fact of his gender. Now that gay marriage is legal, the social battleground has shifted to new frontiers, frontiers that include the most private aspects of people's lives. Transgender Americans have gained greater visibility and acceptance as stars like Caitlyn Jenner and Laverne Cox have trained a pop-culture spotlight on trans issues. Corporate leaders across the *Fortune* 500 have moved to protect their transgender employees. And in May, the Obama Administration declared that all public schools must treat students equally regardless of their gender identity, classifying inner feelings of maleness

We have come to the point where the President of the United States can candidly and comfortably discuss gender fluidity

and femaleness as protected by the government. We have come to the point where the President of the United States can candidly and comfortably discuss gender fluidity.

We have also come to the point where the backlash against these rapid changes has manifested in sometimes surreal fashion, as it did earlier this year during the so-called battle of the bathroom, when about half of all states joined lawsuits against the Obama Administration. There have been reports of increased violence directed at transgender people. At least 21 trans Americans were murdered in 2015, according to the Human Rights Campaign, up 62% from the year before. And that was before the mass murder in June at an Orlando nightclub, the deadliest incident of violence against LGBT people in U.S. history.

Pregnancies like Evan's—and the many that are likely to follow—will stretch our cultural perceptions of gender norms even further. Americans are just starting to open up to the idea that you may be born into a female body, but believe that you are really a man. But what if you are born into a female body, know you are a man and still want to participate in the traditionally exclusive rite of womanhood? What kind of man are you then?

This question can bother people. It can make them uncomfortable. That's partly why, when Evan texted me to say, "I'm pregnant!" I was excited for him, but also frightened. I thought about what strangers might say to my bearded, big-bellied little brother when he was nine months along. And I wondered, Would he be safe?

I AM SIX YEARS OLDER than Evan. We also have a middle sister, Katje. As a trio, we've always resembled one another, but Evan and I were the most alike. We still have the same patterns of speech and the same slight roll to our shoulders that we inherited from our grandmother on our dad's side. Once, when Evan was in college at Oberlin and I was in grad school at the University of California, Berkeley, he flew across the country to visit me. When he got off the plane, we were both wearing the same thing: puffy down vests over long-sleeved ultimate-frisbee T-shirts and baseball caps worn backward.



By then, my brother had already come out to himself and friends as trans, but he didn't tell me until 2003, when he started taking hormones. He called me to say that when he came for my graduation, I should call him Evan.

Over the next few months, I watched his body change. He started binding his chest with a thick bandage wrap. His hair began to thin. His hips disappeared and were replaced by thick muscles around his chest. But mostly, I remember his hands. We both have the same small hands, the same indelicate, stubby fingers. I watched the hair grow thick over his knuckles, which were my knuckles. I felt sad that, feature by feature, I was losing my doppelgänger.

The transition was messy. Our parents were supportive but distracted. They were in a protracted divorce after my father had, at 50, come out as gay. Katje and I dated women, and I would kid

^
*Evan has made the sea horse
his mascot. Male sea horses, which
adorn his house, give birth*

Evan that being gay wasn't rebellious enough in our family; he had to do us one better and change gender. Looking back, I regret these jokes. They were a crass way to cover the pain of knowing that the childhood we all shared—the one in which we were three round-faced, pigtailed girls in matching dresses—had been a charade for my brother.

I said the wrong things all the time. That first year Evan looked strange to me, like a butch lady or a girly man. He went through a sped-up version of puberty that brought changes to his voice and testosterone-fueled impulses he didn't understand. I often *she'd* him by accident. I'd forget and call him

by his given female name, or refer to him as *her*. And in an attempt to sound interested and supportive, I asked him invasive and personal questions, often in mixed company. Once, during a brunch with our extended family, I asked him about whether he planned to alter his genitals. "Jessi," he said, raising his right eyebrow in that way we both do. "I don't talk about your vagina in front of Aunt Rosie."

Thirteen years later, no one mistakenly *she's* my brother. Physically, he is transformed. He's 5 ft. 6 in., just tall enough that he makes a respectable short guy. Before his pregnancy, he injected hormones into his thigh once weekly to lower his estrogen while boosting his testosterone. He elected not to have top surgery, the double mastectomy that many trans men undergo, because he is allergic to most antibiotics. Also, he knew he might one day want to nurse a baby. So he wears

two compression-tank binds made by a company called Underworks beneath his shirt. “It hurts, but I’ve gotten used to it,” he told me. “I imagine it’s like some women getting used to high heels.”

His transformation is as much social as it is physical. It’s not just that Evan looks like a guy. For nearly a dozen years, the world has responded to him as a guy. At first, particularly when he was with other men who didn’t know he was trans, this made him nervous—like he would somehow say the wrong thing and out himself. But now he’s comfortable. To medical professionals, he’s a trans guy, but to the rest of the world and to himself, he’s just a guy.

IN 2013, when Evan made an appointment with his primary-care physician at the Boston LGBT health center Fenway Health, he was the first prospective birth father his doctor had seen. Several years earlier, a few trans men who, like my brother, had undergone hormone treatment but kept their reproductive organs, had begun consulting physicians about pregnancy and speaking openly about wanting to give birth. In 2008, Thomas Beatie posed for *People* magazine, bare-chested with a rotund belly, and went on *Oprah* to talk about his pregnancy. Trans men began to trickle into fertility clinics more frequently. When Andy Inkster was turned away from a Massachusetts clinic in 2010 because he was told he was “too masculine” to have a baby, he sued for gender discrimination. The case settled a few years later; Inkster sought out another clinic and later gave birth to a daughter.

What happened to Inkster is not uncommon. Medical care of all kinds is complicated for trans Americans. Roughly 1 in 5 have been turned away by a medical professional at some point, according to the National Transgender Discrimination Survey. Published in 2011 by the National Center for Transgender Equality and the National LGBTQ Task Force, it is one of the largest surveys about trans people, with 6,456 respondents. Half of them reported that they’d had to teach the medical professionals they visited how to treat them. That’s why, until my brother tried to get pregnant, he mostly avoided doctors.

There is very little research about



▲
Evan bathes his son. He says the process of getting pregnant cost him close to \$12,000

trans pregnancies. One of the only medical papers addressing the topic was written in 2015 by the University of California, San Francisco’s Dr. Juno Obedin-Maliver and Harvard Medical School’s Dr. Harvey Makadon. They noted that, in form and function, getting pregnant as a trans man is not that different than getting pregnant as a woman. Most of the time, trans men

stop taking testosterone, and their bodies begin ovulating again. (Testosterone doesn’t necessarily preclude a pregnancy. Some trans men may have unintentional pregnancies while taking it.) If their partner is biologically male, trans men may try to conceive without medical intervention.

My brother has a female partner, so he inseminated using donor sperm. It took a while. The first time Evan tried, five years ago, he was unsuccessful. He took a break before starting again three years ago. He stopped his T shots, Kowalik prescribed two medications to trigger ovulation and

monitored Evan's body throughout the process to get the timing right.

Evan estimates that the entire process, including medication, doctor visits, co-pays and ultrasounds, cost him close to \$12,000 over the course of several years. That's expensive, but it can cost much more. If home insemination doesn't work, trans men may turn to other fertility treatments, like in vitro fertilization. Each round of IVF costs an average of \$12,400, and often, by that point, aspiring parents have already invested a considerable sum in earlier, unsuccessful methods.

If the physical process of getting pregnant is fairly straightforward, transgender birth parents often face more challenges when it comes to mental health. Obedin-Maliver and Makadon referred to two recent studies that highlighted psychological issues involved with trans pregnancies. In both cases, the sample sizes were too small to be statistically relevant, but significant themes emerged. For one, the birth parents were often lonely. And they reported complex feelings about their gender identity. "While having a family is something that many transgender individuals want, pregnancy can lead men to acknowledge that they still have female reproductive organs, which for many can be difficult, however rewarding the pregnancy may ultimately be," they wrote.

My brother has a good friend, also trans, who'd gotten pregnant a year earlier. He'd had a rough pregnancy because he felt a traumatizing disconnect between his masculinity and the female attributes of his body. He took medical leave from work for much of the time and was relieved to restart testosterone immediately after his child's healthy birth. I spoke to another trans dad who had given birth to his son at age 20. He said the pregnancy catapulted him into depression. "It was as if all the things I'd hated about my body were re-emerging, and I felt awful about myself," he told me. Evan didn't have this experience. "It was a gamble," he said. "I didn't know how I'd feel, but it turns out I just feel like it's really cool that my body can do this."

When I called Obedin-Maliver to discuss the research, she cautioned against drawing any conclusions about trans pregnancies based on a few conversations. "Take two pregnant women and

their experiences will be different and we don't ascribe that to their womanhood," she said. "We have to be careful about that and not say there's one trans-man experience going through pregnancy."

Trans men compare notes among themselves and seek support and advice on the Internet. My brother and I belong to a private Facebook group called Birthing and Breast or Chestfeeding Trans People and Allies. It has about 1,780 members. A list of guidelines spells out who can join the group: "People on the transfeminine spectrum, those who are genderfluid, nongender folks, trans-masculine individuals, and cisgender allies." (I am cisgender. This means that my self-identity conforms to the gender of my biological sex. I was born a girl, and I feel like a woman.)

My brother turns to this group when he has questions about chest-feeding—the term trans men have adopted for nursing—or choosing a trans-friendly pediatrician. For many members, it is a primary source of community. One trans dad told me he believes he would have killed himself during the early months of his pregnancy if he hadn't found friends through the group. "When I went off the hormones [to get pregnant], all the mental-health stuff I had as a teenager came back," he told me, referring to a time in his adolescence when he was deeply depressed. "My online friends were the only people who got me."

Just how many trans people have given birth? I asked Makadon, who is also the director of education and training at Fenway Institute, a division of Fenway Health. He couldn't even guess, but he said he expected to see the numbers rise based on the increasing number of trans patients coming to the clinic. Fenway currently sees more than 2,000 of them, a figure that has doubled in less than a decade. He said that, as he visits hospitals

across the country, he hears a lot of stories about health providers treating pregnant trans men. "There's more of it than we know that people aren't tracking," he told me. "There's a lot of people just doing it."

As doctors prescribe hormones, it is becoming standard practice for them to talk with patients about reproduction. "We get questions about cryopreservation," says Obedin-Maliver, referring to the process of freezing healthy eggs. Although there's no data to suggest that regular testosterone treatments will prevent trans men from growing healthy eggs later, some of them elect to do this before starting testosterone treatment. Says Obedin-Maliver: "Trans men want to know what their options are."

DURING MY BROTHER'S first trimester, he only wanted to eat Fla-Vor-Ice pops, Sour Patch Kids and hard-boiled eggs. He threw up constantly. Normally, Evan worked until 7 each day, came home for dinner and then answered a few more emails before bed. But once he was pregnant, his body stopped cooperating. At 8:30 p.m., no matter where he was, he fell asleep. By November, he could tell his supervisor had started to wonder why he was "slacking off." It was time to tell his employer.

During his next trip to his company's Oxford headquarters, Evan scheduled a meeting with the woman in charge of human resources. That morning, he found himself in an office with an open plan; even the conference rooms had glass on three sides. He had just vomited in the bathroom. He tried to fight his nausea as he saw the HR lead approach. She was a short woman with a high voice and a warm demeanor who, Evan thought, was more or less his age. He straightened his tie and followed her into an exposed conference room.

Evan took a moment to center himself, to quell his anxiety. There would never be an easy time for this conversation. He had to get it out. "It wasn't that I expected her to have a negative reaction," my brother said. "I just had no idea at all."

He told the woman he wanted to share some personal information. "I am transgender, which you might know because of my health care paperwork," he said. Paperwork, according to my brother, is how many transgender

Evan took a moment to center himself, to quell his anxiety. There would never be an easy time for this conversation. He had to get it out

people are inadvertently outed in the workplace. An employer will send a letter to Social Security or to the Internal Revenue Service to verify a new hire's personal information; the agency will respond that the wrong gender has been listed. (Evan's friends call this a "no-match letter.") Evan had lived with the possibility that at any moment this could surface, since he'd started the job six months earlier. Maybe this woman had known he was trans all along, he thought.

It turned out she hadn't. She nodded as he spoke and didn't seem fazed. She asked why my brother was bringing it up. "Well, I'm pregnant," he told her. A moment passed. Then, bit by bit, her face broke into a smile. "Well, this is unexpected, but that's great!" she said, and the tension flooded from my brother's shoulders. She told him about her two little girls and how wonderful parenthood was. My brother sat there with her, talking about spit-up and dance recitals, and he remembers feeling like part of a club he'd always looked into from the outside. The normal things that happen to normal parents would be his things, he thought.

For the most part, this is how it went when my brother told people he was expecting. "With most folks, I phrased it, 'Well, you know my partner and I are having a baby, and it works best for our family that I carry the baby,'" he told me. It usually took them a few minutes. Then, as best they knew how, they said supportive, kind things. Our mother started knitting a sweater for the baby. His dermatologist said, "That makes all the sense in the world." When he finally screwed up the courage to tell his supervisor a few weeks after his Oxford trip, she asked how she could be supportive.

This positive attitude is less surprising when you consider that my brother didn't tell many people he didn't know well. He didn't need to. Even at full term, he never looked pregnant. He looked like a guy with a beer belly. He wore collared shirts to work, often with sweater-vests, and when he couldn't button the shirts any longer, he bought bigger ones. When his pants stopped buttoning, he wore them lower and got suspenders. "People talk about the attention you get when you're pregnant, and for the most part that was absent for me," he said. No one

rubbed his belly, asked when he was due or commented that he was carrying the baby low so it must be a boy. "Mostly I liked that, because I don't like body attention normally," he added, "but there's also a loss."

One April afternoon, when Evan was in his eighth month, he stopped by Goodwill to sift through baby clothes. He took a few outfits to the counter. Evan opened his wallet, and the woman behind the register noticed the small ultrasound snapshot he kept tucked inside. She looked at his belly, and smiled at him. His blood ran hot. "That felt incredible!" he said. "She read me! She got me."

EVAN'S MIDWIFE WAS Clare Storck. Really, that's her name. She'd been catching babies for five years at a practice attached to Mount Auburn Hospital in Cambridge, but she'd been working with expectant mothers for most of her adult life as a doula. My brother was her first male birth parent.

When Evan arrived at the midwifery center for his first appointment, he filled out an intake form, but the receptionist had trouble entering his information: if she checked the "male" box, she couldn't open an obstetric record for him. This was a problem throughout the pregnancy—medical forms and insurance claims are not set up to allow people like Evan to be honest about their medical needs.

At first, he fought this at every turn. When his health insurance refused to cover his pregnancy test because he was male, he spent several hours explaining his situation to a representative, waiting on hold and explaining it again. "My sex is female, and my gender is male,"

**'If physiologically
your body can do
this, and you're
comfortable with
the process and
still want to
present as a man,
you can. And
that's awesome.'**

—Clare Storck, Evan's midwife

he told the rep. She was able to override the system and get the cost reimbursed, but he had to call back and do the same thing every time he had an appointment.

Eventually, Evan decided it wasn't worth the effort to fight weekly for coverage. He called his insurer and asked that his gender be changed to female. "When I get insurance letters, they don't say 'sir' or 'ma'am.' They say 'Dear Evan Hempel,' and that's just fine. At the end of the day, it was just frustrating to get denial after denial of services," Evan said.

Despite the initial software limitation, my brother got excellent care from the midwifery practice at Mount Auburn. Practitioners had received some training from Makadon, who had visited recently from Fenway to lead a grand rounds—an hour-long lecture open to anyone on staff at the hospital—on trans births. They shared notes on Evan's preferred gender pronouns and terms for his body, and he had regular appointments with Storck, who listened to his baby's heartbeat, checked in to see how he was feeling and referred him to an acupuncturist when he developed back pain.

Several weeks before the birth, I interviewed Storck, who has an ebullient personality, about her experience treating Evan. She was supportive of my brother's choice to get pregnant. We both marveled at the technological advances and social changes that have enabled my brother's efforts to make a family. "If physiologically your body can do this, and you're comfortable with the process and still want to present as a man, you can," she said. "And that's awesome."

MY NEPHEW ARRIVED on the day he was expected. "I'm not sure he's mine," my brother texted from the hospital. "I've never been on time to anything in my entire life." Six days later, my partner and I drove to Boston to meet the baby. When we arrived, Evan had just finished chest-feeding. He answered the door in pajama bottoms and a nursing tank, with the baby swaddled in the crook of his right elbow. Evan handed my nephew to me, and right away, the baby began squalling, his mouth gnawing at my arm. I handed him back to my brother, who gestured for all of us to sit at the big wooden kitchen table and then started



chest-feeding again.

We sat there like that, in the kitchen of my brother's second-floor apartment, munching on the lemon bars my mom had made, as the summer daylight stretched into evening. The baby ate and slept and ate some more, his right arm curled up to his chin. Evan recounted the birth, giving us a blow-by-blow. He and his partner had arrived at the hospital just after midnight, he said, and as they lumbered toward the receiving room, a nurse passed them. "Can you imagine what she must have been thinking?" my brother asked. Here were a woman and a man walking toward the maternity ward. The woman was weighed down with suitcases, a backpack and the paperwork folder. The man carried nothing but a purple yoga birthing ball, and every few steps, he'd push it up against the wall, lean over it and moan. Evan snickered, and soon we were all laughing at the

^
Evan with his son and his friends' daughters. Eventually, Evan will resume his hormone treatments

thought of it.

I asked Evan if childbirth had changed how he thought about his gender. Wasn't there some part of him that questioned his masculinity? Since he'd first come out, I'd watched him challenge our binary notions of gender—male or female, boy or girl, husband or wife. And yet I still had questions. Were you always a boy trapped in a girl's body, I wanted to ask him, or are you really a girl who got lost for a decade? "You know, people who are not trans talk about being 'trapped in a body.' But that's not really the way my friends talk about it," he said. "I was always Evan. I always had these parts. I always just felt like me, and like I was a guy."

As I puzzled over this, he gulped milk from a glass with a blue sea horse on it. There are sea horses all over their home—on onesies and bibs, in drawings and stitched on blankets. It has become Evan's emblem, because like my brother, the male sea horse gives birth after carrying eggs in a protective pouch on his belly. A sea horse's masculinity is not threatened by gestation; it is reinforced by it.

Evan will continue to chest-feed for a while. Eventually, he'll begin taking testosterone again. His beard will fill out, and the fuzz will return to his knuckles. His chest will shrink to the point where his bind will be comfortable to wear again. To outsiders, his family will look like any other—a tossed-together group of kids and adults raising one another. At night, my brother will watch his son lift a tiny fist above his head as he sleeps and know what all parents know: this baby is a miracle. □





One Size Fits None

Inside the fight to take back the fitting room

By Eliana Dockterman



I HAVE ALWAYS HATED FITTING ROOMS. It's not just that I hate the mirrors meant to trick me into thinking I'm skinnier or the curtains that never close all the way so strangers can glimpse me trying to squirm into too-tight jeans. What I really hate is why I have to go to fitting rooms in the first place: to see if I've distilled my unique body shape down to one magic number, knowing full well that I probably won't be right, and it definitely won't be magic. I hate that I'm embarrassed to ask a salesperson for help, as if it's somehow *my* fault that I'm not short or tall or curvy or skinny enough to match an industry standard. I hate that it feels like nothing fits.

And I'm not alone. "What's your size?" has always been a loaded question, but it has become virtually impossible to answer in recent years. The rise of so-called vanity sizing has rendered most labels meaningless. As Americans have grown physically larger, brands have shifted their metrics to make shoppers feel skinnier—so much so that a women's size 12 in 1958 is now a size 6. Those numbers are even more confusing given that a pair of size-6 jeans can vary in the waistband by as much as 6 in., according to one estimate. They're also discriminatory: 67% of American women wear a size 14 or above, and most stores don't carry those numbers, however arbitrary they may be.

"Insanity sizing," as some have dubbed this trend, is frustrating enough for shoppers who try on clothes in stores. But now that \$240 billion worth of apparel is purchased online each year, it has become a source of epic wastefulness. Customers return an estimated 40% of what they buy online, mostly because of sizing issues. That's a hassle for shoppers and a costly nightmare for retailers, which spend billions of dollars covering "free" returns.

Clearly, modern fashion has a fit problem. And while it does affect men, whose shirts and jeans rarely bear honest measurements, it's a much more sweeping issue for women—not just because we have more clothing options but also because we are more closely scrutinized for what we wear. When we get married or interview for a job or play professional sports or run for President of the United States, we encounter a whole set of standards and expectations. We can be shamed for an outfit that's too slutty, too

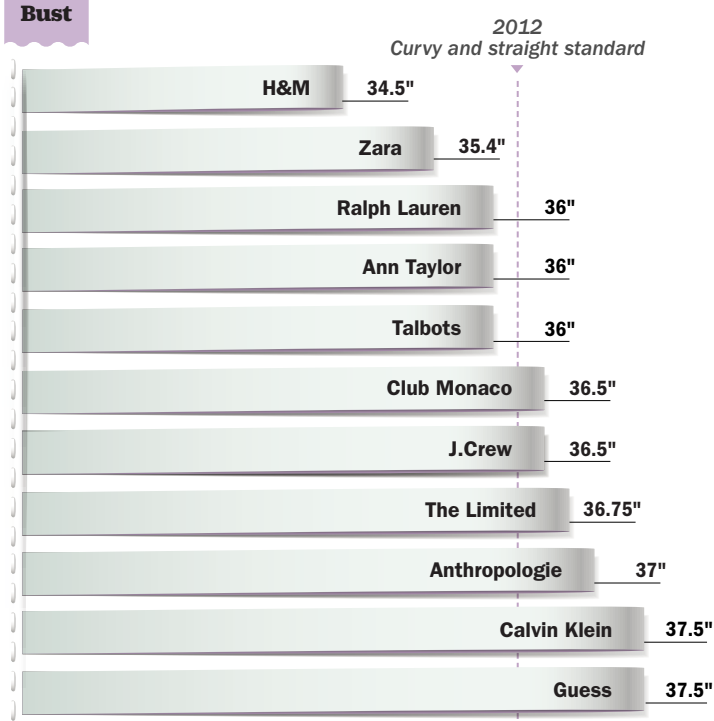
Size 8 through the ages

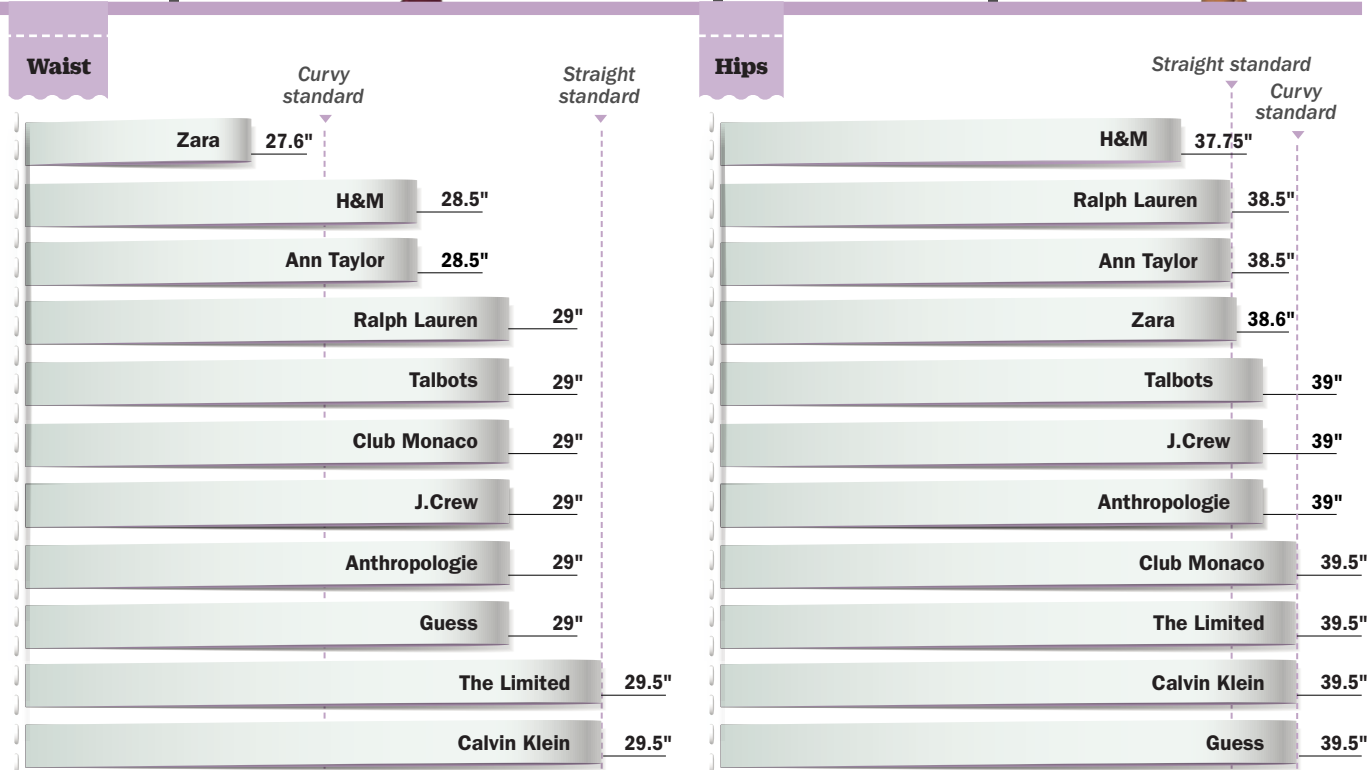
How measurements have evolved since the 1950s, thanks to "vanity sizing"



Size 8 through the brands

How today's dress measurements differ among a sampling of major retailers, according to data collected by TIME





dowdy, too pricey—take your pick. That’s the burden women carry into the fitting room. And when we can’t find clothes that fit, let alone clothes we like, it can be infuriating.

The debate over sizing is an emotional one, especially right now, when so many shoppers are rejecting labels of all kinds, from sexual orientation to gender to, yes, size. For decades, major retailers have generally catered to one (white, slim) consumer even as America has gotten more diverse. Now shoppers are pushing back. They’re turning away from stores like Victoria’s Secret that market a single way to be sexy. They’re demanding that mass-market chains like Forever 21 carry a wider range of sizes in-store. Even celebrities like Beyoncé and Melissa McCarthy are calling out high-fashion designers for ignoring the millions of women with curvier figures.

But underlying it all is the same maddening question: At a time when consumers are more vocal than ever about what they want and need, and retailers are losing money by sticking with the status quo, and tech companies have streamlined every other part of the shopping process, why is it still so hard to find clothes that fit? And what, if anything, can be done about it?

I’M INSIDE AN office closet in San Francisco holding two different dresses, both made by the same brand, both labeled size “small.” They’ve been handed to me by Ruth Hartman, the chief merchandising officer of Le Tote, a startup that measures clothing from major brands in order to recommend the right fit, rather than just the right size, to customers. When I try on the dresses, it’s immediately clear why such a company exists: the first one is tight enough that I struggle to breathe. The second balloons around me.

Hartman nods knowingly. “It’s common,” she says. “I always try on four pairs of a size-8 jean in the same brand because they all fit differently.” The predicament is so absurd, it sounds like a joke. (In fact, it is one on NBC’s upcoming comedy *The Good Place*, set in a heaven-like locale where there is a boutique called Everything Fits.)

This madness is partly our own fault. Studies have shown that shoppers prefer

Find your fit

As the sizing problem worsens, startups are trying to solve it. Here are a few of the most promising ones:



EVERYDAY OUTFITS

As part of its subscription service (\$59 per month), **Le Tote** compares women’s body measurements against those of the brand-name clothes in its inventory and then mails out what will fit best. **TrueFit** asks users—women and men—to share the size and brand of their best-fitting shirt, pants, etc., and then suggests appropriate sizes on retail sites.



FORMALWEAR

Women who use **Rent the Runway** (\$30–\$800 per dress rental) can browse reviews and photos of dresses from other users who share their height, weight and size; **The Black Tux** offers rentals for men, based on customer measurements (\$95 and up).

to buy clothing labeled with small sizes because it boosts our confidence. So as the weight of the average American woman rose, from 140 lb. in 1960 to 168.5 lb. in 2014, brands adjusted their metrics to help more of us squeeze into more-desirable sizes (and get us to buy more clothes). Over time this created an arms race, and retailers went to extremes trying to one-up one another. By the late 2000s, standard sizes had become so forgiving that designers introduced new ones (0, 00) to make up the difference. This was a workable issue—albeit an annoying one—so long as women shopped in physical stores with help from clerks who knew which sizes ran big and small.

Then came the Internet. People started buying more clothes online, trying them on at home, realizing that nothing fit and sending them back. And retailers got stuck with the bills—for two-way shipping, inspection and repair. Now vanity sizing, which was once a reliable sales gimmick, sucks up billions of dollars in profits each year.

So why don’t retailers just stop doing it? In theory, many (or even most) of them could agree to one standardized set of measurements, as mattress companies do, so customers would know exactly what they’re getting when they order a “size 12” dress. This tactic, known as universal sizing, is increasingly being discussed on fashion blogs and at industry gatherings as a commonsense solution to America’s crisis. But there’s a very good reason it won’t work. And to understand why, it helps to understand how sizing came to exist in the first place.

I’M AT A BOUTIQUE in Rome, surrounded by retro-chic clothes that would look right at home in Betty Draper’s closet—bold patterns, colorful capes, high-waisted skirts. It feels oddly appropriate, given that I’m here to be measured for a custom dress, something most American women haven’t done since the 1950s.

The designer is Tina Sondergaard, a Danish woman who opened her first store in Rome in 1988. Since then, she says, she has outfitted everyone from hotshot executives to Italian rock stars to a German princess who “drove by on her Vespa, left it in the middle of the street, walked into my shop and said, ‘I need that dress.’” By comparison, an American journalist

is probably not that exciting. But if Sondergaard is thinking that, it never shows.

As she takes my measurements, I'm struck by how many choices I have. Do I want to show off my arms or hide them? Do I want to emphasize my waist? My legs? "Back in time, this is what people used to do," Sondergaard tells me, explaining how sizing worked for most of human history. If women were wealthy, they had their clothes made. If they weren't, they made their own. Either way, garments adhered to the contours of their bodies better than anything off the rack ever could.

In America, those cultural norms started to shift during the Great Depression, when barely anyone could afford to buy food, let alone fabric. At the same time, industrial techniques were improving, making it cheaper for companies to mass-produce clothes. By the end of World War II, those factors—alongside the rise of advertising and mail-order catalogs—had sparked a consumer revolution, both at home and abroad. Made to measure was out. Off the rack was in.

And sizes arrived. In the early 1940s, the New Deal-born Works Projects Administration commissioned a study of the female body in the hopes of creating a standard labeling system. (Until then, sizes had been based exclusively on bust measurements.) The study took 59 distinct measurements of 15,000 women—everything from shoulder width to thigh girth. But the most consequential discovery by researchers Ruth O'Brien and William Shelton was psychological: women didn't want to share their measurements with shopping clerks. For a system to work, they concluded, the government would have to create an "arbitrary" metric, like shoe size, instead of "anthropometrical measurement[s]."

So it did. In 1958, the National Institute of Standards and Technology put forth a set of even numbers 8 through 38 to represent overall size and a set of letters (T, R, S) and symbols (+, -) to represent height and girth, respectively, based on O'Brien and Shelton's research. Brands were advised to make their clothes accordingly. In other words: America had research-backed, government-approved universal sizing—decades ago.

But by 1983, that standard had fallen by the wayside. And experts argue it would fail now too, for the same reason:



CUSTOM CLOTHES

Fame & Partners enables women to design bespoke dresses, starting at \$199. Startups like **Indochino** and **Suit Supply** do the same for men's suits, both starting at \$399.



LARGER SIZES

There are many Le Tote-like subscription services in this space, including **Gwynnie Bee** (\$95 per month, sizes 10–32) and **Dia & Co** (\$55 per box, sizes 14–32).



UNDERWEAR

After **ThirdLove** users upload two photos of themselves (front and profile) wearing a bra and a tank top, the app determines optimal bra-cup size, band size and style. Its basic T-shirt bra costs \$68.

there is no "standard" U.S. body type. Universal sizing works in China, for example, because "being plus-size is so unusual, they don't even have a term for it," says Lynn Boorady, a professor at SUNY Buffalo State who specializes in sizing. But America is home to women of many shapes and sizes. Enforcing a single set of metrics might make it easier for some of them to shop—like the thinner, white women on whom O'Brien and Shelton based all of their measurements. But "we're going to leave out more people than we include," Boorady says.

Then again, the majority of American women are being left out right now.

I'M IN A FITTING ROOM at Brandy Melville in New York City, a few steps from a sign promising that **ONE SIZE FITS MOST**. At this store, there are no sizes—just racks of sweatshirts, crop-tops and short-shorts whose aesthetic could be described as Coachella-meets-pajamas. Many of Brandy Melville's teen and tween fans love this approach, in part because they can all try on the same clothes.

For me, it's a mixed experience. I'm 5 ft. 9 in. and, though we've already established sizing is meaningless, the clothes in my closet are mostly sizes 4 or 6. But when I try on the stretchy shorts and skirts, the fit is so tight it feels like I'm wearing underwear. Immediately I understand why critics say this store fuels body-image issues.

Brandy Melville denies it's exclusionary. "Anyone can come in the store and find something," its visual manager, Sairlight Saller, told *USA Today* in 2014 (the retailer declined to comment for this article). "At other places, certain people can't find things at all." The first statement is patently false: no one store can fit every human body. But the second is spot-on. Some of Brandy Melville's looser tops did fit me, and they could fit women who are much curvier than I am. Most retailers largely disregard the latter demographic.

This is a confounding business policy. The majority of American women wear a size 14 or above, which is considered "plus size" or "curvy" in the fashion industry. And they're spending more than ever: In the 12-month period ending February 2016, sales of plus-size apparel hit \$20.4 billion, a 17% increase over the same period ending February 2013,

according to the market-research firm NPD Group.

And yet the plus-size market is treated as an afterthought. Nearly all advertising campaigns feature thin models. Most designers refuse to make plus-size clothing. Some retailers have even launched plus-size brands only to kill them several years later, as Limited parent L Brands did with Eloquii (which was sold and relaunched by private investors after an outcry from consumers).

For shoppers, the message is inescapable: if you're over a certain size, you don't belong. "It's like we've been taught we all should have third eyes, and if you don't have a third eye, what's wrong with you?" says McCarthy, the Emmy-winning actor who has been "every shape and size under the rainbow" and is currently a size 14. "If you tell people that long enough, in 30 years everyone's going to go, 'You see that one? She's only got two eyes.'" In stores, she adds, the plus-size sections are often relegated to obscure areas, like the corner or on a different floor, if they exist at all. "If I have a friend who is a size 6, we can't go shopping together. They literally segregate us. It feels like you're going to detention when you go up to the third floor."

McCarthy isn't the only shopper speaking out. Earlier this year, blogger Corissa Enneking, who calls herself a "happy fatty," wrote a viral open letter to Forever 21 after encountering a plus-size section she describes as shoved into a corner "with yellow lights, no mirrors and zero accessories." "Your reckless disregard of fat people's feelings is shameful," she continued. (At the time, Forever 21 said this wasn't an "accurate representation" of its brand.) Even Beyoncé, now considered an icon in the fashion world, has been vocal about how hard it is for women with curves to find clothes. Designers "didn't really want to dress four black, country, curvy girls," she has said of her early years with the group Destiny's Child. "My mother was rejected from every showroom in New York."

Clothing companies say it's hard for them to make and stock larger sizes, because it requires more fabric, more patterns and more money. That's all technically true, says Fiona Dieffenbacher, who heads the fashion-design program at the Parsons School of Design. "But if you

have the volume of a big brand, it's a no-brainer. You're going to get the sales." The more complicated issue, argues SUNY Buffalo State's Boorady, is that most designers still equate "fashionable" with "skinny." "They don't want to think of their garments being worn by plus-size women," she says.

Slowly, those biases are breaking down. Victoria's Secret, for example, is attempting to rebrand itself to emphasize comfort and authenticity ("No padding is sexy," a recent ad declares) after one of its competitors, Aerie, generated considerable buzz—and sales—by using models with rolls, cellulite and tattoos. Nike is using a plus-size model to sell sports bras. H&M is expanding its plus-size collection. And designers are starting to embrace a broader array of body shapes. (Consider Christian Siriano's collection with Lane Bryant, Sofia Vergara's collaboration with Kmart and McCarthy's line, Seven7, all of which offer extensive plus-size options.) This is how fashion is supposed to work, says Sondergaard, the Danish dressmaker. "Many designers say, 'This is the dress—let's try to fit people into this.' But it's the opposite: You look at people, and say, 'Let's try to fit a dress for this body.'"

Even as sizing becomes more inclusive, however, confusion persists: "size 20" is just as meaningless as "size 6." And for now, at least, the solution isn't design. It's data.

I'M IN MY APARTMENT in New York City, about to open a box that I'm told represents the future of retail. It's come courtesy of Le Tote, the startup I visited in San Francisco. Here's how the service works: I spend a few minutes awkwardly taking my own measurements with a measuring tape. Then I send that information to Le Tote, which runs my actual size—not the arbitrary numerical one—through its massive database of clothing measurements. Days later, I get a box of outfits picked specifically for my body.

The algorithm behind it all is called Chloe, and it's more encyclopedic than any human salesclerk. In addition to tracking my shape, Chloe can track my likes and dislikes. If I get a pair of boyfriend jeans that hang too loose, for example, I can tell Chloe I don't like that style, even though it technically fits.

Next time Chloe will know to size down.

Online retailers are salivating over technology like this, which may well enable them to win more customers. TrueFit, a Boston-based startup with its own database of measurements, works with more than 10,000 sites, including Nordstrom, Adidas and Kate Spade. Its algorithm asks shoppers to enter the size and brand of their best-fitting shoe, shirt, dress, etc.; then it recommends products accordingly.

These services aren't perfect. Le Tote, for instance, doesn't yet offer petite and plus-size options, nor do many of the brands that work with TrueFit. And it's hard to predict personal style. As TrueFit co-founder Romney Evans puts it, "You can have someone who technically fits into a horizontally striped jumpsuit but hates Beetlejuice." To its credit, though, Chloe found clothes that worked well for my body. When I opened the Le Tote box, almost everything fit.

SO, ARE WE CLOSE to solving the sizing crisis? Yes and no. Startups like TrueFit and Le Tote are certainly taking steps in the right direction, cutting through the chaos of Internet shopping to offer clear, actionable intel. Ditto brands like Aerie and designers like McCarthy, who are proving that it's good business to push the boundaries of traditional sizing.

There are many other entities trying to start a retail revolution. Among them: BodyLabs, which creates 3-D fit models of the human body; Amazon, which recently patented a TrueFit-like algorithm; Gwynnie Bee, which offers a clothing-subscription service for plus-size women; and Fame & Partners, which allows shoppers to design their own dresses. It's too early to tell which ones will succeed.

But even if all of them flourish and sizing becomes radically inclusive and transparent, there's no guarantee that we—the shoppers—will like what we see in the mirror. Vanity sizing works because, deep down, we're all a little vain. And no matter how many strides it makes, the fashion industry can't change its *raison d'être*: to make us feel like better versions of ourselves, one outfit at a time. Sometimes, that requires deception. Often, it drives us crazy. That's why I hate fitting rooms—until I find something I love. □

2016

THE BEST OF THE BEST IN MOVIES, TELEVISION, MUSIC, BOOKS, ART AND THEATER

FALL Arts

PREVIEW

WHAT'S INSIDE:

MOVIES: A TRANSFORMED EMILY BLUNT BRINGS *THE GIRL ON THE*

TRAIN TO THE BIG SCREEN **TELEVISION:** VIRAL STAR ISSA RAE GETS

INSECURE ON A BOUNDARY-TESTING COMEDY **MUSIC:** ALICIA KEYS FINDS

A PERSONAL NEW VOICE **BOOKS:** JONATHAN SAFRAN FOER RETURNS WITH A

STIRRING NOVEL **ART:** REVOLUTIONARY MEXICAN MODERNISM IN PHILADELPHIA

THEATER: AN ELECTROPOP MUSICAL INSPIRED BY *WAR AND PEACE* HITS BROADWAY



FALL ARTS PREVIEW

MOVIES

Emily Blunt's deep dive

BY ELIZA BERMAN

EMILY BLUNT HAS COME A LONG WAY FROM HER STARMAKING TURN AS a Louboutin-loving fashionista in 2006's *The Devil Wears Prada*. To play the lead role in *The Girl on the Train*, out Oct. 7, she had to deglamorize like never before. "Talk about no makeup," she says over salmon teriyaki and iced green tea at a Brooklyn sushi joint on a late-summer evening. "We added makeup to make me look even *more* like I had no makeup." Each day she was decorated with prosthetic under-eye bags, varicose veins and rosacea, along with a changing array of contact lenses meant to evoke various stages of inebriation: pinkish for buzzed, bloodshot for hammered, tinged with yellow for brutally hung over.

Yet for all the attention lavished on the minutiae of her appearance, the key to playing such a truly damaged character—a divorced, infertile alcoholic obsessed with the perfect-looking lives of a couple she whizzes past on her daily commute—lay far beneath the bleary-eyed surface. To bring Rachel Watson to life, Blunt, 33, had to learn how to identify with the humiliation and isolation familiar to many addicts. She disappeared so thoroughly into the character that even her husband, actor and director John Krasinski, says he didn't recognize her onscreen. "For the first time ever," he says, "I forgot it was my wife."

High praise as that may be, Blunt will need to impress tougher critics: the millions of readers who buoyed the movie's inspiration, Paula Hawkins' 2015 novel of the same name, to the No. 1 spot on the *New York Times* best-seller list for 13 weeks straight. While the book is the kind of impossible-to-put-down Hitchcockian psychodrama that begs for a film adaptation, its success creates a daunting bar for the movie to clear. "That's what I found so appealing," says Blunt. "It's less about the thriller of whodunit. It's the

PHOTOGRAPH BY PETER HAPAK FOR TIME



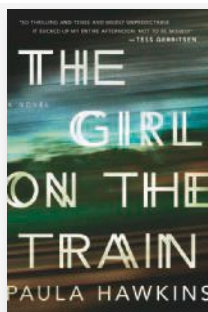
*For her new role,
Blunt hit the books
on the psychology
of addiction*

idea of your blackout drunk protagonist making sure *she* didn't do it."

THE NOVEL WEAVES TOGETHER the perspectives of three interconnected women. There's Rachel, who rides the commuter train from suburban Westchester into New York City. Then there's Megan (Haley Bennett), whose house Rachel's train passes each day and who, Rachel imagines, has a perfect marriage. And finally there's Anna (Rebecca Ferguson), the real estate agent for whom Rachel's husband (Justin Theroux) left her. When Megan goes missing, Rachel believes she can help solve the mystery—though she can't be sure that she didn't, during a blackout, have something to do with Megan's disappearance.

The challenge for director Tate Taylor, whose credits include the 2011 civil-rights-era drama *The Help* and the 2014 James Brown biopic *Get On Up*, was to produce an unflinching portrait of addiction without skimping on the pleasures of a thriller. "I was really protective of the addict and her emotions," he says. "I've been touched by it—everybody has at some point. I didn't want to make a film where it was not treated properly."

Since breaking out stateside in *Prada*, the London-born Blunt has shown uncommon range as an FBI agent (*Sicario*), a singing baker's wife (*Into the Woods*)



'The life you think you want is not necessarily real.'

—Emily Blunt

and a bona fide action hero (*Edge of Tomorrow*). She knew how easily portraiture could slide into caricature. "I was nervous to do that drunk-uncle act," she says. To avoid the pitfalls (and pratfalls) of exaggeration, she immersed herself in literature on substance abuse, talked to recovering alcoholics and watched lots of the A&E reality series *Intervention*.

"You see the humiliation of being an addict and what it does to your family," Blunt says of the show's depiction of chemical dependency. "And physically, I needed to see how alcoholics move when they're really wasted." Those movements had to be calibrated for every scene, so Taylor and Blunt created a system of levels to indicate drunkenness that could work as cues—"kind of like the Homeland Security color codes," jokes Taylor.

"When you have that foggy recollection of the night before, there's a shame that comes along with it that she plays so beautifully," says Theroux. "Living with that shame, it snakes its tail: the more shame you feel, the more you drink. The more you drink, the more shame you feel."

Few big-budget Hollywood films feature such a compromised female character in a lead role, and Blunt's self-loathing narrator who can't even trust her own memory could clang with some viewers.

BLUNT: NBC

History's journey to the big screen

The stories behind many of the fall's most anticipated films mark significant moments in history, from a revolt that took place before modern technology to one that had everything to do with its invention. Here's the timeline of events that led to this season's cinematic lineup:

The Supreme Court overturns Richard and Mildred Loving's miscegenation conviction, legalizing interracial marriage June 12, 1967

U.S. Army medic Desmond Doss becomes the first conscientious objector to be awarded a congressional Medal of Honor Oct. 12, 1945

Reporter Christine Chubbuck commits suicide during a live television broadcast July 15, 1974

Three months after breaking his neck in a car accident, boxer Vinny Paz defeats Luis Santana

Historian Deborah Lipstadt learns David Irving intends

Tupac Shakur dies at a Las

Biopic Legal battle Tragedy Family drama

71 years

Nat Turner begins the deadliest slave rebellion in American history Aug. 21, 1831

But Taylor says the goal was empathy, not likability. “Do I need to have Rachel have a karaoke moment in a bar where you think she’s adorable?” Taylor says. “When you lean into someone’s pain and get to the root of it, you soften. You want them to win.”

Blunt says she found the role, free of the typical leading-woman clichés, liberating. “It was so refreshing that I didn’t have to worry about appealing to a male audience. I don’t give a sh-t, honestly,” she says with a laugh. “All I want is for people to understand her.”



In The Girl on the Train, Blunt plays a voyeur consumed by the lives of others

LIKE THE BOOK that inspired it, *The Girl on the Train* works not only because it’s thrilling but also because it successfully grapples with broader themes. Anxieties about class, fidelity and unmet expectations come to the fore as Rachel tries to solve the mystery. She faces the pain of her disappointments by staring down a bottle of vodka, while the life she craves—a loving marriage in a charming white colonial—recedes from view through the window of a train.

Her extreme way of coping may not be universal, but the feelings that drive it are. Social media offers a constant stream of glowing status updates—the more meaningful career, the more affluent lifestyle, the more intimate marriage—that can erode even the most

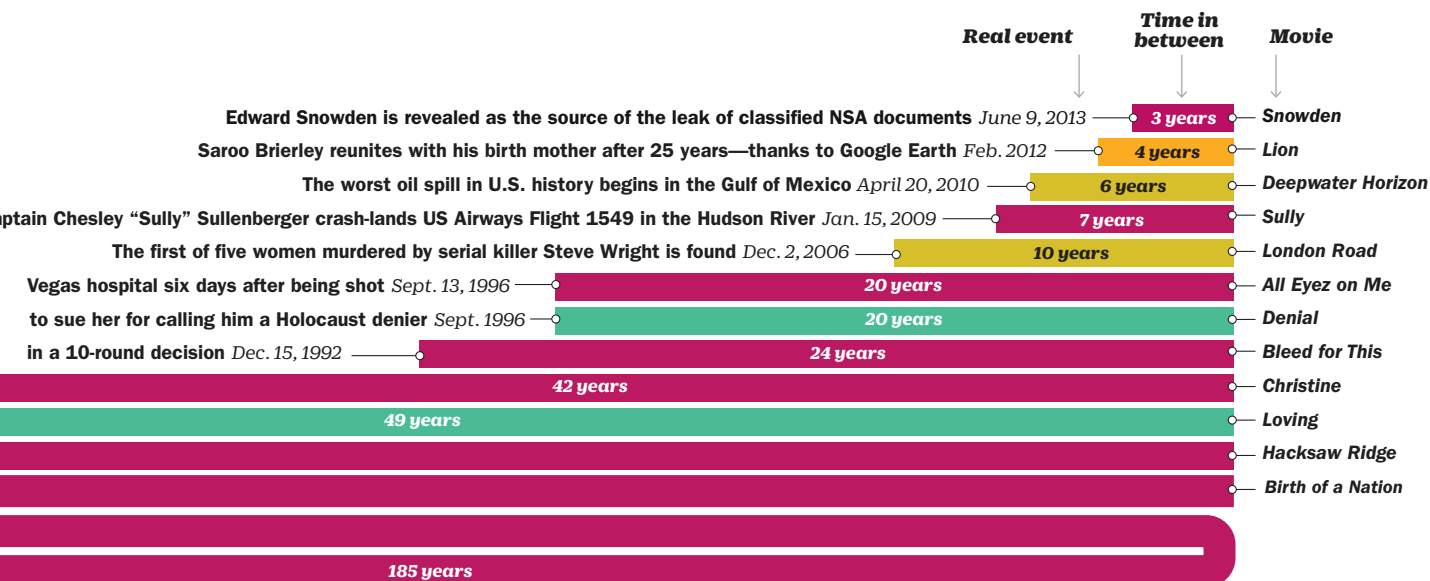
confident among us. Strip away the specifics, and we’ve all been Rachel, staring out at the life we’d rather have. “We live in a world of ‘the grass is greener,’ living vicariously through others,” says Blunt. “But the life you think you want is not necessarily real.”

Back at the sushi restaurant, her salmon teriyaki obliterated, Blunt takes out her phone and pulls up a photo of her 9-week-old daughter, as if to lighten the mood. “Aren’t baby smiles the best?” she asks. With her two kids in mind, she’s lined up a slate of roles far removed from *Train*’s darkness, including breathing new life into the beloved nanny in Disney’s

Mary Poppins Returns, due out in 2018.

Still, you won’t find those baby smiles on her Instagram feed, because Blunt doesn’t have one. She’s content playing characters for a living and says she has no desire to make her daily life into spectacle. “People can make assumptions based on what they see on the red carpet, but that’s not my life,” Blunt says. “There’s nothing real about it.”

When our conversation ends, she’ll go home, feed the baby and tune in to last night’s episode of her favorite guilty pleasure, *America’s Got Talent*. It’s a kind of antidote to the jealous train-window glare: not envying the lives of others but rejoicing in their success. And then, when the credits roll, perhaps she’ll turn off the TV and rejoice in her own. □



FAMILY

DISNEY'S NEXT
HEROINE: THE
ANTI-PRINCESS

PARTWAY THROUGH *MOANA*, AN animated musical due out Nov. 23, the titular character's traveling companion, a tattooed demigod named Maui (voiced by Dwayne "The Rock" Johnson), refers to her as a princess. "I am not a princess," Moana says. "If you wear a dress and you have an animal sidekick, you're a princess," he counters. But Disney's latest heroine, a 16-year-old Polynesian voiced by newcomer Auli'i Cravalho, puts an end to this mansplaining—not with a witty retort but by navigating the ocean, defeating a pissed-off lava monster and saving the world with a dim-witted pet rooster in tow.

The newest Disney heroine to join the ranks of Belle and Ariel is, in fact, just what she says she is. That's the point, say directors Ron Clements and John Musker, who helmed such classics of the genre as *The Little Mermaid* and *Aladdin*. "We saw this as a hero's journey, a coming-of-age story, in a different tradition than the princess stories," says Clements. Adds Musker: "I don't know that any other princesses we've been involved with we'd describe as badass."

Unlike many of her predecessors, Moana has no love interest. Nor is she a strutting waif, since she must believably "hold her own in the demands of this physical environment," Musker says. All of these departures from princesses past help turn Moana into a model for anyone who's ever asked, as she does, "What's wrong with me?" The answer? Absolutely nothing. —E.B.

MOVIES
CALENDARSEPT. 16
BRIDGET JONES'S BABY

The hapless Bridget Jones (Renée Zellweger) is back, pregnant and embroiled in a paternity mystery.

SEPT. 23
THE MAGNIFICENT SEVEN

In this reboot of the classic western, with Denzel Washington and Chris Pratt, outlaws unite to protect a town from a heartless industrialist.

SEPT. 30
AMERICAN HONEY

Shia LaBeouf and newcomer Sasha Lane take to the road with a crew of wayward youths.

SEPT. 30
MISS PEREGRINE'S HOME
FOR PECULIAR CHILDREN

A boy (Asa Butterfield) discovers a home for misfit kids and strives to protect them from evil.

OCT. 21
MOONLIGHT

Barry Jenkins' film, told in three parts, tracks a young man exploring his sexuality.

NOV. 11
ARRIVAL

A linguist (Amy Adams) is a crucial translator in the wake of an extraterrestrial invasion.

NOV. 18
THE EDGE OF SEVENTEEN

Life for awkward high schooler Nadine (Hailee Steinfeld) plunges into misery when her brother and best friend hook up.

NOV. 18
MANCHESTER BY THE SEA

In this powerful Sundance hit, an uncle (Casey Affleck) steps in after his nephew's father dies.

NOV. 18
FANTASTIC BEASTS AND
WHERE TO FIND THEM

The wizarding world descends into chaos in this 1920s-era *Harry Potter* spin-off, starring Eddie Redmayne as a magizoologist. ▶

NOV. 23
RULES DON'T
APPLY

In 1950s Hollywood, a starlet under contract with Howard Hughes (Warren Beatty) gets secretly entangled with her driver.



MOANA: DISNEY; BRIDGET JONES'S BABY: UNIVERSAL; THE MAGNIFICENT SEVEN: MGM; FANTASTIC BEASTS AND WHERE TO FIND THEM: WARNER BROS.

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All quotes are from online customer reviews.

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- 2 Gold-Medal California Cabernet**
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- 3 Mature Spanish Gran Reserva**
"Complex and very, very good."
- 4 Handcrafted Chianti**
"Soooo smooth and easy to drink. I love it!"
- 5 Double-Gold California Zin**
"Love this big, juicy Zin ... never disappoints."
- 6 Gold-Medal Bordeaux**
"Super wine ... delightful to sip all night."
- 7 Southern Italian Blockbuster**
"Fantastic velvety texture ... instant favorite!"
- 8 Top-Estate Argentine Malbec**
"Magnificent ... I will buy this again and again."
- 9 90-Point Portuguese Discovery**
"Rich, lively, fruity, deep ... extraordinary!"
- 10 Gold-Medal Côtes-du-Rhône**
"Love this red – earthy and beautiful."
- 11 Superstar Italian Red**
"Melt in your mouth smooth."
- 12 Francis Ford Coppola Cab**
"Wonderful, rich wine. Big surprise."



FALL ARTS PREVIEW

TELEVISION

Issa Rae's breakout moment

BY DANIEL D'ADDARIO

"I WANT TO MAKE THIS VERY CLEAR," ISSA RAE SAYS AS SHE DESCRIBES *Insecure*, the HBO comedy she created and stars on. "This is not the quintessential black-woman experience. It's a very specific experience."

The emphasis is unnecessary. Rae, whose popular web series *The Misadventures of Awkward Black Girl* and memoir with the same title catapulted her from office drone to Hollywood up-and-comer, has no trouble getting her points across. And while her show comes at a time when television finally has more than a few nonwhite characters who are not just tokens, *Insecure*, which premieres Oct. 9, is about as far from a generic idea of the "black-woman experience" as it gets.

Rae's character, also called Issa, shares a sharp wit with her creator but lacks direction in work and in her relationship. "She's me if I didn't know what I wanted to do," says Rae. Working at a nonprofit for inner-city kids, Issa—the character—is fatigued by her white co-workers, who treat her with a mix of condescension and curiosity. "Issa," one asks, looking for a definition, "What's on fleek?"

Rae compares her show to another HBO comedy—and it's not the other semiautobiographical one created by and starring a young woman. "I always talk about *Curb Your Enthusiasm*," she says. "I'm not Jewish, and there's a lot of stuff that's specific to that show that I didn't get, that I had to look up. And that's fine. It still made me laugh, and it was funny." It's a telling comparison. Rae's misanthropy and determination to march to the beat of her own drum place her more in line with Larry David than Lena Dunham, or the protagonists of shows like *black-ish*, *Empire* and *Scandal*, prominent among a current wave of series in which race informs, but doesn't define, the characters.

PHOTOGRAPH BY MAARTEN DE BOER

South L.A.
is “the Los
Angeles we
wanted to
depict and
make sexy”
on *Insecure*,
says Rae



If You Paid for the Antibiotic Cipro in California You Could Get Money from a Class Action Settlement

A partial Settlement has been reached in a class action lawsuit involving the antibiotic drug Cipro. The lawsuit claims that Bayer Corporation, Barr Laboratories, Inc., Hoechst Marion Roussel, Inc., Watson Pharmaceuticals, Inc., and The Rugby Group, Inc. (the "Defendants") violated antitrust and consumer protection laws by agreeing not to compete with each other and keeping lower cost generic versions of Cipro off the market. The Defendants deny this. No one is claiming that Cipro is unsafe or ineffective.

WHAT DOES THE SETTLEMENT PROVIDE?

Hoechst Marion Roussel, Inc., Watson Pharmaceuticals, Inc., and The Rugby Group, Inc. have agreed to pay \$100 million into a Settlement Fund (the "Fund"). After deducting attorneys' fees, costs, and other fees and expenses, the Fund will be distributed to Class members who file valid claims. Payments will be based on the number of valid claims filed and how much you paid for Cipro. It is estimated that consumers will receive at least \$25 each. The Settlement Agreement, available at the website www.CiproSettlement.com, contains more details. The Settlement Agreement involves only Hoechst Marion Roussel, Inc., Watson Pharmaceuticals, Inc., and The Rugby Group, Inc. Bayer Corporation previously settled. The case will continue against Barr Laboratories, Inc.

WHO IS INCLUDED?

Generally you are included if you paid a pharmacy, doctor's office, or hospital for some or all of a Cipro prescription in California between January 8, 1997 and December 31, 2005.

Excluded from the Class are all persons who obtained Cipro through MediCal Prescription Drug Program, anyone who purchased Cipro in order to resell it, governmental entities, the Defendants and their related entities, all purchasers of Cipro who paid a flat co-payment and who would have paid the same co-payment for a generic substitute under the terms of their health insurance policy, and all persons or parties that have excluded themselves from the Class.

HOW TO GET A PAYMENT

Class Members must submit a Claim Form to get a payment. **If you submitted a Claim Form and received payment in the Bayer settlement, visit the website www.CiproSettlement.com for more information.** The information from your previous Claim Form will be used to calculate your share of this settlement. The Claim Form, and instructions on how to submit it, are available at www.CiproSettlement.com or by calling 1-866-404-0135. The deadline to submit a Claim Form is **December 15, 2016**.

YOUR OTHER RIGHTS AND OPTIONS

If you are a Class Member, your right to exclude yourself from the Class (to opt out) expired in 2004, when the Class was certified and the original notice was disseminated. You may comment on or object to the proposed Settlement. To do so, you must act by **September 23, 2016**. Details on how to comment or object are at www.CiproSettlement.com.

The Court will hold a hearing on **October 7, 2016** to consider whether to finally approve the Settlement and whether to approve Class Counsel's application for attorneys' fees of up to one third of the Settlement Fund, plus expenses, and service awards for the Class Representatives.

FOR MORE INFORMATION AND A CLAIM FORM

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As with *Curb's* milieu-specific humor, *Insecure* has moments that may confuse viewers less fluent in contemporary black culture, hip-hop and L.A. geography. The show is set in South Los Angeles, a place rarely shown in a positive light, and the neighborhood is a central character. "That's the Los Angeles we wanted to depict and make sexy, the same way *Entourage* made Beverly Hills sexy," Rae says. In creating a deeply textured world in which one woman flails, *Insecure* has some of the fall TV season's greatest, most painful laughs.

THIS SHOULD COME as no surprise to anyone even casually familiar with *Awkward Black Girl*. The web series mined, in broad and delightful strokes, the experiences of another woman like Rae, mired in a call-center job while dreaming of the chance to express herself. Today Rae calls the web series "a bit more caricaturey." Given an HBO-size budget



'This is not the quintessential black-woman experience.'

and the chance to collaborate with a writers' room and showrunner Prentice Penny (*Brooklyn Nine-Nine*), she's created a show with winding, serialized plotlines and a genuine sense of place. The pilot was co-written by Larry Wilmore before he left to host Comedy Central's recently canceled *Nightly Show*.

"Her landscape is not crowded right now. In the world of HBO, Showtime, there's nobody doing what she's doing," says Wilmore. "She gets to stand on her own, which is fantastic."

And she's motivated to do it. Rae says the possibility of being pulled back to a cubicle still drives her. "I'm still, to a degree, scarred by the stuff I hated about working a 9-to-5," Rae says. "Any time I feel like getting lazy or procrastinating in my current situation, I always think back to that. *Bitch, do you want to still be at that 9-to-5?* And I act right."

Television is funnier for it. □

DOCUMENTARY

Behind the whirlwind rise of Beatlemania in *Eight Days a Week*

When the Beatles came to America in 1964, the band and its entourage took over an entire wing on the 12th floor of New York City's Plaza Hotel, surrounded by screaming fans outside and inundated by reporters and showbiz VIPs inside. Yet even with all that space, the Liverpool lads couldn't find a place to relax. "We had a floor full of people who wanted a piece of us—a phone call or a signature or this or that," Ringo Starr tells TIME. "And we ended up in one of the bathrooms—the four of us! That was one of those incredible moments in my life, that we ended up laughing in the toilets just to get a break from the constant

[demands] sucking us dry."

The mania that compelled the rock stars to take such drastic measures is captured in a new Hulu documentary directed by Ron Howard, *The Beatles: Eight Days a Week—The Touring Years*, which debuts Sept. 17 on the streaming service. Packed with nearly two hours of rarely seen footage and photos—some crowdsourced from fans—the film seeks to answer a critical question: How did four wildly talented young men survive five years in the eye of an unparalleled pop-culture hurricane, and where did they find the

wisdom to say it had to stop?

On Aug. 29, 1966, the Fab Four played their last proper concert, at San Francisco's Candlestick Park. When they left the stage after performing Little Richard's "Long Tall Sally," they were whisked away in an armored car. Locked in the back with his bandmates, Paul McCartney recalls "quite a little mountain of miserable moments" crystallizing. "God knows whose idea it was," McCartney says. "The inside was chrome and stainless steel with nothing in it, and so we were sliding around. As we turned the corners, we were going, 'Oh, goddamn it, what's going on?' It was so symbolic."

"You couldn't write that," Howard interjects. "If you put that in a movie, it'd be too much."

"That was the final straw," McCartney adds. "Before that one of us or two of us might have been complaining, but it wasn't all of us. On that moment in the back of that van, it was unanimous."

—Isaac Guzmán and David Walkama



The Fab Four in front of the U.S. Capitol in February 1964

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DRAMA

NETFLIX'S TAKE ON ROYALS MAY BE A CROWNING ACHIEVEMENT

THE BRITISH ROYAL FAMILY HAS BEEN fodder for all manner of entertainment, but Netflix's ambitious new show *The Crown*, premiering Nov. 4, aims to be the first to dramatize Queen Elizabeth II's life in full. The series was budgeted at an estimated \$156 million and will span five seasons, one for each decade of the Queen's reign. "What effect does it have on a woman to suddenly become two people, Elizabeth Windsor and Elizabeth Regina?" asks Peter Morgan, the series' Oscar-nominated creator. The show suggests, for example, that her coronation adversely affected her marriage. "She was only 25," Morgan says. "Philip was forced to give up his naval career and become her consort. That led to all sorts of tensions."

This is not Morgan's first go-round with Elizabeth: he also wrote the 2006 film *The Queen* and the 2013 play *The Audience*, both starring Helen Mirren as the monarch. This time, it's Claire Foy playing a younger Elizabeth. But as with his past projects, *The Crown* required heavy research. "Other showrunners have writers' rooms," says Morgan. "I have a researchers' room." Seven people

were hired to dig up material and interview former palace staff. But Morgan doesn't communicate directly with the royal family: "They're very aware of the project, but the palace and I exist in a state of respectful distance from one another."

—ELIANA DOCKTERMAN

Claire Foy dons a crown to play Queen Elizabeth II



TELEVISION CALENDAR



SEPT. 6 ATLANTA

Community star Donald Glover plays a Princeton dropout trying to launch his cousin's rap career in this dramedy about race, money and music in Atlanta. (FX)



SEPT. 6 QUEEN SUGAR

Selma director Ava DuVernay teams up with Oprah Winfrey for a drama about siblings who run a sugarcane farm. (OWN)

SEPT. 21 SPEECHLESS

The comedy, starring Minnie Driver, follows a family with a special-needs child—played by the actor Micah Fowler, who has cerebral palsy. (ABC)

SEPT. 22 PITCH

The sports drama imagines the triumphs and travails of the first female MLB pitcher. (Fox)

SEPT. 30 LUKE CAGE

Jessica Jones' bulletproof love interest gets his own Marvel superhero show. (Netflix)

OCT. 2 WESTWORLD

The controversially explicit sci-fi show, starring Anthony Hopkins and Evan Rachel Wood, aims to succeed *Game of Thrones*. (HBO)

OCT. 13 FALLING WATER

The supernatural series follows three strangers who see different parts of the same dream when they sleep. (USA)

OCT. 14 GOLIATH

Fresh off an Emmy nod for *Fargo*, Billy Bob Thornton plays a lawyer looking for redemption. (Amazon)

NOV. 21 SEARCH PARTY

Arrested Development alum Alia Shawkat stars as a Brooklynite searching for a lost friend—and the meaning of life. (TBS)





FALL ARTS PREVIEW

MUSIC

Keys in the song of life

BY SAM LANSKY

ALICIA KEYS HAS SUNG MANY SONGS ABOUT NEW YORK CITY, BUT SHE'S never released an ode to the Big Apple quite like "Gramercy Park." The track, which she recently recorded as she prepares her upcoming and still untitled new album, is a marvel of a thing, with warm guitars and buttery vocals built around a hook that fits the star's current mind-set like a glove: "Now you're falling for a person who's not even me," goes the chorus. In a West Hollywood, Calif., recording studio, Keys cranks up the volume and grooves to the steady backbeat, a beatific smile on her face. "There were times where I didn't even know who I was anymore," she tells TIME. "I'd spent so much time trying to be who I thought *you* wanted me to be."

Whether she's referring to a specific person or the world at large hardly matters. For Keys, 35, this album is about returning to her true self. In photo shoots and appearances, she's going makeup-free. At the intimate live concerts she's been playing, she's banned the use of cell phones to encourage her fans to be more present. She insists all of it has helped her make the best music of her career. "It was the craziest combustion of magic and energy," she says. "Whimsical, spiritual, electric, thunderbolt-struck. *Boom!* Music is there. *Boom!* I'm on my knees on the floor, praying. It dropped from the sky. Everybody was there to receive it. *Boom!* There it was."

That *Boom!* translates in the urgency of the new songs, which are gutsy, vital and raw. Keys' voice flips from silky to rough and back again, while slick pop production has been traded for stomping percussion and tense strings. The lead single, "In Common," is a gorgeously featherweight bit of tropical house, but the pained sentiment of the lyrics—"If you could love somebody like me/ you must be messed up too"—provides gravity. Other recent songs tackle subjects ranging from racism and poverty (a pounding anthem titled

PHOTOGRAPH BY ZOLTAN TOMBOR



Along with a new sound and introspective focus on her upcoming album, Keys has adopted a natural, makeup-free look

“The Gospel”) to the environment (the haunting “Kill Your Mama”). Bracing honesty is the unifying theme. “For so long, I was looking for other people’s approval,” Keys says. “I’ve never allowed myself to be vulnerable before.”

KEYS HAS WON 15 Grammys and sold 35 million albums since her 2001 debut, with a rare combination of sustained critical and commercial success. Yet she’s experimenting with a new direction both in the sound of her upcoming album and with her gig as a coach on the 11th season of *The Voice* (premiering Sept. 19), where she and Miley Cyrus will join longtime panelists Blake Shelton and Adam Levine. Why rock the boat?

Keys describes a personal and political awakening that she wanted to address with her new material. “You know all the sh-t I’m sick of?” she asks. “I’m sick of the way women are treated in the world. I’m sick of myself. I’m sick of putting myself in this box because I don’t want to say anything that’s going to be taken the wrong way. I’m sick of the way boys can’t paint their nails.”

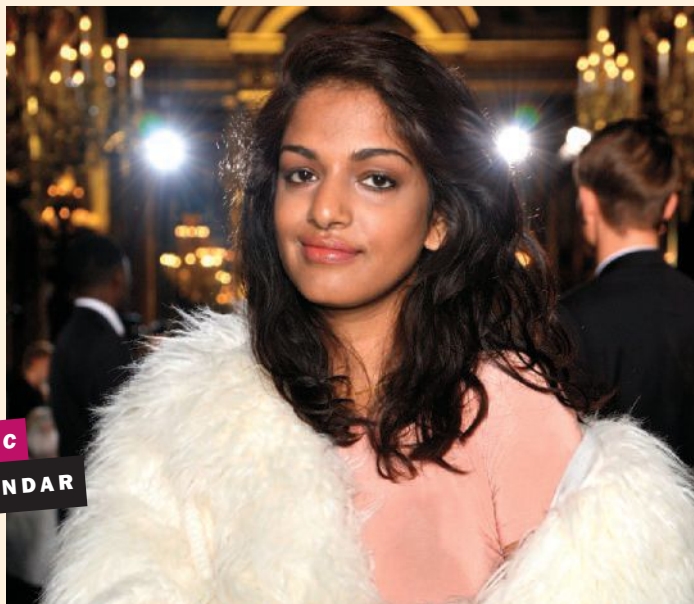
Her new album is a chance to speak to issues of race and violence, now at the fore in America. Keys has children

with her husband, the producer and artist Swizz Beatz, and the deaths of young black men at the hands of law enforcement feel especially raw. “No mother or father should watch their child be killed for no more reason than having on a hoodie,” she says, shaking her head.

It has also meant getting comfortable with uncertainty. Though Keys promises the album is coming this fall, it doesn’t have a confirmed sale date. She says she’s written over 200 songs, and hints at an unconventional release strategy for at least some of that material. Listening to it back in the West Hollywood studio, she seems just fine with that. “I’m a person that likes a bow on things. I like things to be completed,” Keys says. “But some sh-t’s just not going to have a bow!” Then she laughs, as though she has surprised even herself. □

‘I’ve never allowed myself to be vulnerable before.’

MUSIC CALENDAR



SEPT. 9 **M.I.A./A.I.M.**

British-Sri Lankan hip-hop artist M.I.A. doubles down on her controversial politics with assists from Diplo, Skrillex and Zayn.

SEPT. 16 **WILLIE NELSON/ FOR THE GOOD TIMES**

The prolific singer-songwriter’s latest project is an inspired collection of Ray Price covers.

SEPT. 23 **SHAWN MENDES/ ILLUMINATE**

The Canadian Vine star has proved that he’s radio gold with his catchy single “Treat You Better.”



SEPT. 30 **BANKS/THE ALTAR**

On her sophomore set, Jillian Banks employs muscular beats and spooky vocals on songs about love, sex and empowerment.

OCT. 7 **GREEN DAY/ REVOLUTION RADIO**

The album’s first single, “Bang Bang,” sounds like a sinister “American Idiot.”

OCT. 7 **NORAH JONES/DAY BREAKS**

The nine-time Grammy winner’s sixth studio album sees her returning to her soulful piano roots.

OCT. 14 **KINGS OF LEON/WALLS**

The Tennessee-bred quartet offers an updated set of indie rock.

OCT. 14 **FRENCH MONTANA/MC4**

Moroccan-born Montana nabbed Drake for the lead single, with a track list rounded out by rap’s A list.

OCT. 14 **JOJO/MAD LOVE**

After a decade of label limbo, the vocal powerhouse is back with a new set of polished R&B-pop.

OCT. 28 **TOVE LO/LADY WOOD**

The Swedish siren burnishes her rep as the cool girl of EDM-pop with more moody dance anthems for the down-and-out.

NOV. 11 **STING/57TH & 9TH**

The icon’s 12th solo studio album leans back toward rock.

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FALL ARTS PREVIEW

BOOKS

Foer's family drama

BY LEV GROSSMAN

IN JANUARY 2012 THERE WAS A FLURRY OF ARTICLES ON A NEW COMEDY in development at HBO called *All Talk*. The show was about a Jewish family in Washington, D.C., and the tone would be, according to a quote in *Deadline Hollywood*, “politically, religiously, culturally, intellectually and sexually irreverent.” Ben Stiller would star and direct; Scott Rudin would produce. *All Talk* was written and created by Jonathan Safran Foer.

It might’ve been a great show, but we’ll never know, because at the last possible minute Foer killed it. “Two years writing it, and it got greenlit, and we were just a month or two from shooting, it was cast, it was ready to go,” Foer tells me over coffee in Brooklyn recently. “And I had a kind of nervous breakdown, almost. I don’t want to be a showrunner. That’s not how I want to live my life. Which begs the question, How do I want to live my life? It was after that that I really went into high gear on this book.” By *this book* he means his new novel, *Here I Am*.

Foer grew up in D.C. and started writing in college at Princeton, where he took a class with Joyce Carol Oates. “It was almost accidental,” he says. “It was one class among a pretty eclectic selection of classes—that semester I think I took intro to metaphysics and epistemology, intro to astrophysics, abnormal psychology and creative writing. I didn’t think I was going to become any of those things.” One day Oates took him aside before class and told him she liked his writing. “It was this incredible revelation,” Foer says. “I thought I just gave in these submissions every other week and they were discussed for 15 minutes and then recycled and that was it.”

But that wasn’t it. Oates became his mentor, and Foer’s senior thesis at Princeton became *Everything Is Illuminated*, a novel published in 2002,

PHOTOGRAPH BY JEFF MERMELSTEIN



when he was 25. His second novel, *Extremely Loud and Incredibly Close*, followed three years later. The books racked up a slew of honors and prizes, and both were made into movies. Foer got a lot of media attention, including from *TIME*—I interviewed him for a profile in 2005. I didn't think it would be 11 years before I interviewed him again, but that's how long it has taken him to publish his third novel.

Though he's sporting a lot of stubble, Foer looks only slightly less boyish at 39 than he did at 28. It's not that he hasn't been doing anything all these years—he just hasn't been doing what everybody expected him to do.

"Over the last decade or so, I worked on a lot of projects," he says. "I wrote a libretto [for the opera *Seven Attempted Escapes From Silence*, which premiered in Berlin in 2005]. I wrote *Eating Animals* [a nonfiction book about eating meat, in 2009]. I edited a Haggadah [the *New American*

Foer's college thesis became his best-selling first novel, Everything Is Illuminated

Haggadah, a collaboration with the writer Nathan Englander]. I did this like weird crossover art book called *Tree of Codes* [an art book referencing Bruno Schulz's *The Street of Crocodiles*]." And then there was *All Talk*.

He was keeping busy, but he also felt like he was spinning his wheels. "I was proud of them, but they also were sort of—" Foer stops and starts the sentence over, something he does a lot. "I was blowing air into a deflating balloon, trying to keep the shape of being a writer, even though I was feeling less and less like a writer as time passed."

Some of this had to do with his feeling more and more like a dad. He's been raising his kids—his first son was born the year *Extremely Loud and Incredibly Close* appeared, his second

three years later, both with the writer Nicole Krauss, from whom he is now divorced. (For the past couple years he's been dating the actor Michelle Williams.) And that was the other part of the spinning—divorce is time-consuming. "Part of it was probably that I was afraid that I wasn't working on something that befit this finite amount of time on earth," he says. "I mean, why am I doing this? I don't know if this matters! Even if I could recognize something as being good by some sort of external system of valuation—like, there are things in the world where you say, Yeah, I recognize that that's good, but it's not for me..."

This move, the semitheoretical clarification of the thing he just said, is also typical of Foer's conversation. It's the kind of thing that sometimes gets him tagged as pretentious—there's a certain segment of New York's literary world that loves to hate Foer: for his charmed life, his

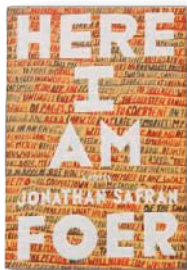
Wunderkindheit, his real estate (his Park Slope row house was briefly on the market for \$14 million in 2014), his fraternizing with celebrities, his self-seriousness. In July an email exchange between him and Natalie Portman, published in the *New York Times*' *T* magazine, provoked a lot of media trash talk and a full-blown parody in the *Forward*.

In person, Foer is affable and funny, dotes on his kids, asks you a lot of questions and actually listens to the answers, and doesn't turn a hair if you show up half an hour late to an interview date (long story). But it's also true that he doesn't go in for a ton of self-deprecating humor. His jokes are rarely at his own expense. He seems to have a very stable sense of his place in the universe. He says he was unperturbed by the gossipy blowback to the Portman kerfuffle, for example: "Didn't make anything of it. That's not a cold or evasive answer. I just didn't." Draw your own conclusions.

AFTER TORPEDOING ALL TALK, Foer got in touch with Eric Chinski, who had edited his first novel, and arranged to start working with him on a new book. Like most novels, *Here I Am* has multiple origin stories. Foer borrowed several plot elements from *All Talk*, but another piece of the puzzle came from a family trip he took to Israel. "I ended up paying a visit to the earthquake preparedness center," Foer says. "Every once in a while I get a little itch; like, I'd sure like to see that... I think part of being a writer is assuming there might be some future value to that itch." In this case there was: in the middle of *Here I Am*, Israel gets hit with a massive earthquake that severely damages the Church of the Holy Sepulchre and the Wailing Wall and destabilizes the entire region politically.

But that's getting ahead of ourselves. For the first 250 or so pages, *Here I Am* is the story of the family Bloch. Like Foer's family of origin, the Blochs are Jewish, live in D.C. and consist of two parents (Jacob and Julia) and three sons (Sam, Max and Benjy). Jacob is a mildly thwarted novelist turned TV writer. Julia is an architect.

One of the things that Foer does extremely well is to evoke the idiosyncratic verbal hothouse that virtually all families develop. He does this through rapid-fire, many-sided dialogue:



What Jacob and Julia lose the ability to do is to say the title of the book: 'Here I am'

"Dad?" Benjy said, entering the kitchen yet again, his grandmother in tow. He always said Dad with a question mark, as if asking where his father was.

"Yeah, buddy."

"When you made dinner last night, my broccoli was touching my chicken."

"And you were just thinking about that?"

"No. All day."

"It all mixes in your stomach, anyway," Max said from the threshold.

"Where'd you come from?" Jacob asked.

"Mom's vagina hole," Benjy said.

"And you're going to die, anyway," Max continued, "so who cares what touches the chicken, which is dead, anyway."

Benjy turned to Jacob: "Is that true, Dad?"

"Which part?"

"I'm going to die?"

"Why, Max? In what way was this necessary?"

"I'm going to die!"

Yet beneath the homey surface, massive unspoken fears and desires are surging. With his bar mitzvah barreling down the pike, 12-year-old Sam has started acting out at school, and at home he retreats into a *Minecraft*-esque online otherworld. Julia is flirting with a handsome client. Jacob has acquired a secret phone that he uses to sext with a colleague. The lights

are flickering—you can watch Jacob and Julia fall in and out of love with each other in real time on the page. They've let their most important selves become separate and secret, submerged beneath safe, convenient, high-functioning facades:

Julia's unwavering composure with the children had grown to resemble omnipatience, while her capacity to express urgency to her husband had shrunk to texted Poems of the Day. Jacob's magic trick of removing Julia's bra without his hands was replaced by the depressingly impressive ability to assemble a Pack 'n' Play as he carried it up the stairs. Julia could clip newborn fingernails with her teeth, and breastfeed while making a lasagna, and remove splinters without tweezers or pain, and have the kids begging for the lice comb, and compel sleep with a forehead massage—but she had forgotten how to touch her husband. Jacob taught the kids the difference between farther and further, but no longer knew how to talk to his wife.

What Jacob and Julia lose the ability to do, in a sense, is to say the title of the book: "Here I am." It's a reference to the Old Testament: when God calls out to Abraham to ask him to sacrifice his son Isaac, that's how Abraham responds.

The book will surely be read as autobiographical—it is, after all, a painfully authentic story of a divorce written by somebody who just went through one—but Foer isn't particularly eager to connect those dots. "My divorce didn't affect the plot of the book at all," he says. "But I'm sure it informed emotions that are being expressed."

Here I Am is one of those books, like *Middlemarch*, or for that matter *Gone Girl*, that lays bare the interior of a marriage with such intelligence and deep feeling and pitiless clarity, it's impossible to read it and not re-examine your own family, and your place in it. "It's very hard in the context of a domestic everyday life relationship to ask questions like 'Who have I become?' or 'Who have you become?'" Foer says. "The whole point of what's tragic about domestic life is that people don't talk that way. It's not that they have those conversations and reach tragic truths—it's that they never have those conversations." □

BOOKS
CALENDAR



SEPT. 6
THE PIGEON TUNNEL

By John le Carré

The renowned spy novelist shares his own story, reflecting on how his experience in British intelligence and travels around the world inspired characters and plotlines in classics like *The Spy Who Came In From the Cold* and *The Constant Gardener*.

SEPT. 13
COMMONWEALTH

By Ann Patchett

Two families' trajectories are forever changed by an encounter at a girl's christening. As a grown woman, that girl shares her family's story with a novelist who turns it into a successful book, further shaking the roots.

SEPT. 13
NUTSHELL

By Ian McEwan

The author of *Atonement* is back with a *Hamlet*-inspired novel about a pregnant woman's plot

to murder her husband—as told by the unborn child in her womb. (Yes, the narrator is a fetus.)

OCT. 4
THE WANGS VS. THE WORLD

By Jade Chang

A disaffected Chinese-American businessman, penniless after the financial crisis, decides to make a fresh start back in China, but no one in his family wants to cooperate.

OCT. 11
HAG-SEED

By Margaret Atwood

The *Handmaid's Tale* author retells Shakespeare's *The Tempest*, starring a resentful failed theater director who plots his ultimate vengeance through a performance at a local prison.

OCT. 11
THE MOTHERS

By Brit Bennett

This highly anticipated debut novel follows a black community in Southern California as it deals with the years-long fallout over a clandestine teen pregnancy.

NOV. 15
SWING TIME

By Zadie Smith

In the new novel from the author of *White Teeth*, two brown girls growing up in 1980s London dream of becoming professional dancers—but only one has the necessary physical skills.

NOV. 15
THE SPY

By Paulo Coelho

The author of *The Alchemist* fictionalizes the life of Mata Hari, one of the world's most famous courtesans, who was executed for espionage in 1917.

CHILDREN

TALES OF A KIDS'-LIT POWER COUPLE

BY SARAH BEGLEY

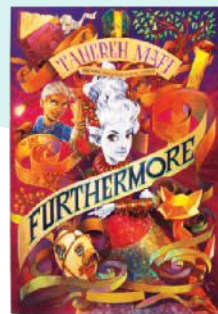
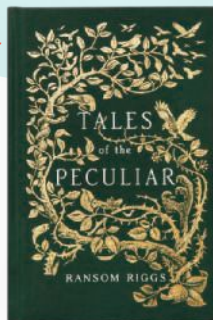
FAIRY TALES USUALLY INVOLVE A happily-ever-after, and Ransom Riggs and Tahereh Mafi's love story is no exception.

Riggs, 37, and Mafi, 28, were already best-selling writers when they met: he is the author of the *Miss Peregrine's Home for Peculiar Children* series, a time-travel story about a Florida teen who visits Wales and discovers a community of kids with magical powers. She is the author of the *Shatter Me* series, whose heroine lives under a corrupt regime and has the power to kill by touch. The two swam "in the same waters of Southern California young-adult-bookhood," Riggs says, and a mutual author friend introduced them. Both had recently gotten divorced, and the shared state of mind "fast-forwarded our friendship," Mafi says. They married in 2013 and later held a reception at the Last Bookstore in downtown L.A. Mafi carried a paper bouquet made of pages from one of Riggs' books.

Now as their fans head back to school, they are each releasing a new book. Mafi's is a novel for middle schoolers called *Furthermore*, about a magical land where powers are manifested in people's colorful skin and hair—except for protagonist Alice Alexis Queensmeadow, who is as pale as milk, with snowy locks to match. (The name is a nod to both Alice of *Wonderland* fame and the late fashion designer Alexander McQueen.) The plot turns on Alice's search for her missing father amid ever more fantastical worlds. Meanwhile, Riggs is publishing *Tales of the Peculiar*, a collection of original fables intended to be a companion to his *Miss Peregrine* series. It recalls not only books like J.K. Rowling's *Potter* compendium but also medieval works like Giovanni Boccaccio's *The Decameron*.



Tales is illustrated with exquisitely spooky woodcut prints by Andrew Davidson



While Riggs ended up as a YA author by chance, Mafi always wanted to write for kids and young adults

The couple's joint book tour includes a dozen stops and an appearance by Mafi on *Late Night With Seth Meyers*. Soon after, they'll attend the premiere of the Tim Burton-directed movie adaptation of *Miss Peregrine*. "It's still difficult to believe,"

Mafi and Riggs have sold 1 million and 7 million copies, respectively



says Riggs, who studied film before writing the book. "I've been a huge fan of Tim's ever since I've been old enough to know what movies were." Mafi's *Shatter Me* series was also optioned and is being adapted for TV.

When the dust settles, the couple will return to their home office in Santa Monica, where they write side by side at a long desk looking out on the lawn. Each serves as the "in-house cheerleader" for the other, according to Riggs. At the end of the day, they often read their output aloud—for encouragement, not criticism. "When we share work at that early stage," Mafi says, "it's because we're looking for reassurance."

"It's easy to give her reassurance though," Riggs says, "because her early drafts are ah-mazing."

"Oh, my god, yeah, says the man who is an incredible writer himself."

"Yeah, yeah, yeah."

They may have millions of devoted readers, but it's clear Mafi and Riggs are each other's biggest fans. □



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FALL ARTS PREVIEW

ART



▲ **KERRY JAMES MARSHALL**

In works invested with a kind of madcap virtuosity, Marshall, 60, brings African-American lives vividly into the discourses of art history. One of the many things that make his paintings so smart is that Marshall knows that our shared

history routinely runs through inauspicious places, including beauty parlors and housing projects. Thus his 1993 barbershop extravaganza *De Style* (above), where the witty deployment of historical references

extends to the title, a pun on the Dutch modernist movement *De Stijl*. On Oct. 25, the Met Breuer in New York City welcomes "Kerry James Marshall: Mastry," a show that originated at the Museum of Contemporary Art in Chicago.



◀ **MEDARDO ROSSO**

Impressionist painters gave us a world in meltdown. In the work of Monet, Renoir and Pissarro, solid forms dissolved into tantalizing pools of color. Starting in the 1880s, the young Italian sculptor Medardo Rosso stepped eagerly into that new shape-shifting universe, determined to prove, in works like *Jewish Boy* (left), that even sculpture, ordinarily the most stable medium, could soften and dematerialize to suggest gentle movement, the suppleness of flesh and the lambent play of light. On Nov. 11 the Pulitzer Arts Foundation in St. Louis opens "Medardo Rosso: Experiments in Light and Form," the first major Rosso museum show in the U.S. in more than 50 years.





MEXICAN MODERNISM

Modern art in Mexico strayed from the paths mapped by European artists. Painters like Frida Kahlo, Diego Rivera and José Clemente Orozco knew all about fractured space and distorted form, but their work had closer ties to peasant life and to realism, however dreamlike. “Paint the Revolution: Mexican Modernism, 1910–1950”—which includes Maria Izquierdo’s *Our Lady of Sorrows*, above—opens Oct. 25 at the Philadelphia Museum of Art and charts their multivalent course.



BARBARA KRUGER

After almost three years of renovations and expansion, the galleries of the I.M. Pei-designed East Building of the National Gallery in Washington, D.C., will reopen on Sept. 30. The \$30 million project added a rooftop sculpture terrace and two new galleries, providing more than 12,250 sq. ft. of display space. One of the shows that will mark the occasion is a bijou exhibition—just 15

pictures—of work by the American conceptual artist Barbara Kruger. They’re all in her signature style of blunt declarations, like “We don’t need another hero” or “Know nothing, Believe anything, Forget everything,” rendered in sans-serif type and laid over black-and-white photos she finds in magazines. The best of them are pointed—but in slightly oblique directions.

—Richard Lacayo

ART

CALENDAR



SEPT. 10

“DOUG AITKEN: ELECTRIC EARTH”

Los Angeles Museum of Contemporary Art

Moody multiscreen video and film installations, and then some, in a midcareer retrospective.

OCT. 14

“RAGNAR KJARTANSSON”

Hirshhorn Museum and Sculpture Garden, Washington, D.C.

Can any single show manage to summarize the laconically witty, crazily inventive—and sometimes heartbreaking—Icelandic video and performance artist? Let’s see.

OCT. 16

“DEGAS: A NEW VISION”

Museum of Fine Arts, Houston

A broad view of the reluctant French Impressionist, an intricate mind and acute eye attached to a vexed soul.

OCT. 16

“THOMAS STRUTH: NATURE AND POLITICS”

High Museum of Art, Atlanta

More than 30 new works by the canny German photographer, with many glimpses into rarely seen technological and scientific research facilities.

OCT. 26

“PIPILOTTI RIST: PIXEL FOREST”

The New Museum, New York City

The blithe, sensual and phantasmagorical Swiss video artist is ready for her closeup.

NOV. 13

“JOHN MCLAUGHLIN PAINTINGS: TOTAL ABSTRACTION”

Los Angeles County Museum of Art

Hard-edged minimalist abstraction doesn’t get more eye-banging than in the tight quarters of this SoCal artist who died 40 years ago.



NOV. 21

“FRANCIS PICABIA: OUR HEADS ARE ROUND SO OUR THOUGHTS CAN CHANGE DIRECTION”

Museum of Modern Art, New York City

The idiosyncratic French artist was an outlier on the royal road of 20th century modernism, and an interesting one.

THEATER
CALENDAROPENING OCT. 10
OH, HELLO ON BROADWAY

Nick Kroll and John Mulaney are a pair of 30-something New York writer-comedians who became alt-comedy sensations by playing a pair of crotchety New York 70-somethings. Their alter egos, Gil Faizon and George St. Geegland, have kvetched their way through improv theater, late-night TV guest spots, skits on Comedy Central and, recently, a hit off-Broadway show. Now they're taking their act to Broadway, in a fully dressed-up show directed by Alex Timbers (*Peter and the Starcatcher*). Expect Big Apple in-jokes, ad-libbing with the audience and surprise guests—just the thing to shake up stuffy theatergoers still grumbling that they can't get tickets to *Hamilton*.

SEPT. 7
COME FROM AWAY

This new musical is set on 9/11 in Gander, Newfoundland, the tiny town where planes from around the world were grounded after the terrorist attacks. It opens at Washington's Ford's Theatre and will move to Toronto and hit Broadway later this season.

OCT. 6
HOLIDAY INN

The beloved Irving Berlin movie musical, filled with holiday standards like "White Christmas," gets a new Broadway incarnation, with Bryce Pinkham and Corbin Bleu in the Bing Crosby and Fred Astaire roles.

OCT. 13
HEISENBERG

Two strangers meet in a train station and start a troubled love affair in Simon Stephens' enigmatic play, which had an off-Broadway run last season and will transfer to Broadway, with Mary-Louise Parker starring.

OCT. 19
LOVE, LOVE, LOVE

A young London couple hook up in the peace-and-love '60s and then have to deal with the more complicated times ahead, in this drama from the impressive Mike Bartlett (*King Charles III*), being given its U.S. premiere off-Broadway by the Roundabout Theatre.

OCT. 20
THE FRONT PAGE

Ben Hecht and Charles MacArthur's famous newspaper comedy gets a new Broadway makeover, boasting the season's starriest cast, headed by Nathan Lane, John Slattery and John Goodman.

OCT. 27
FALSETTOS

A groundbreaker when it first appeared (as two one-acts) in 1981

and 1990, William Finn and James Lapine's probing musical gets a welcome Broadway revival.

OCT. 30
LES LIAISONS DANGEREUSES

Two formidable theater stars, Janet McTeer and Liev Schreiber, headline this new version of Christopher Hampton's cynical comedy of conniving aristocrats in prerevolutionary France.

NOV. 14
NATASHA, PIERRE & THE GREAT COMET OF 1812

War and Peace as a musical? It worked as an immersive cabaret-style show, and now Dave Malloy's rocking take on Tolstoy will try to conquer Broadway with the help of singer Josh Groban, making his Broadway debut.

DEC. 4
DEAR EVAN HANSEN

A misunderstood teen becomes an unlikely hero thanks to the Internet in this provocative chamber musical, making the move to Broadway after a critically hailed off-Broadway run in the spring.

—Richard Zoglin

Groban plays the musing Pierre to Denée Benton's lovestruck Natasha





I now have scientific proof of how awesome I really am—and you can too

By **Joel Stein**

AFTER I ASKED MY UBER DRIVER HOW HIS DAY WAS GOING, Zhirayr pounded on his steering wheel. “I knew this was going to be a good ride!” he yelled. “You know why?” I figured Zhirayr was a fan of my column, enjoyed seeing me on TV or noticed I was not about to vomit from drunkenness. It was none of those things: “You are a five!”

At the end of every Uber ride, not only do you rate your driver from one to five stars, but your driver also rates you. This rating was more or less secret until this spring, when Uber began allowing people to check their personal number through its app. Although my drivers see a full five stars when I ask for a ride, my exact rating is a 4.97, putting me in the very top percentile of Uber customers. This in no way means I’m better than other people, unless you believe in objective, scientific polling.

OVER THE DECADES I have wasted minutes worrying if I’m too prying, too loud, too talkative, too cocky. Big Data has provided the previously unknowable answer to what other people think of me, and that answer is 4.97.

The knowledge an Uber rating can offer is incredibly useful. It’s also too important to be limited for use in deciding who to pick up for a ride. We could be using it for judgments about dating, electing Presidents and giving raises to columnists. I called Ed Baker, Uber’s vice president of growth, who seemed like a great guy even though he’s a 4.84. He agreed that Uber had a crucial insight that could really help society. “It would be cool if we put everyone’s rider ratings on their desk,” he said, considering ways to improve his company. I got off the phone before he tried to give me a job. Since I’ve become aware of my super rating, I have learned to be careful not to lead people on.

I now knew how much people like me, but I wanted to know exactly why. What if it’s just because I’m handsome? Or it’s because of pheromones? Or something else that means I can try even less? I called Arun Sundararajan, an NYU business-school professor and the author of new book *The Sharing Economy*. “A near perfect rating means you were consistently pleasant, civil, conversational, polite to the wide range of individuals who gave you your Uber rides,” he said, “even when you were busy, distracted, late or stressed.” I do not know why Sundararajan thinks a person gets busy, distracted or stressed when their job is to write a one-page column. But I think it’s that inability to empathize that makes him a 4.33.

My lovely wife Cassandra overheard me mentioning my 4.97 while I was telling her how lucky she is to be married to



such a good person. She, however, saw it differently. “You’re more of a people pleaser than you are a good person,” she said. “When we go out to a restaurant, you make such an effort to talk to the waitstaff, you become a burden to them. Stop asking them about their kid! They have a job to do, and you’re slowing them down.” Admittedly, Zhirayr missed our highway exit when I asked him about emigrating from St. Petersburg to Armenia during perestroika, but he still gave me five stars.

Cassandra told me she gets exhausted after riding with me in an Uber, since she feels bombarded by the chaotic experiences I draw out of our drivers. Two weeks ago, after a flight was delayed overnight, she was about to ask me not to talk to our driver, but wasn’t sure I could do it. “Luckily,” she said, “I shut the conversation down because that guy was so annoying. He said, ‘You need to have another kid because your son would be so lonely.’ Ugh!” Now I know how I lost that 0.03.

I HAD SEEN Gregory Cason, a Beverly Hills psychologist who had been on Bravo’s *LA Shrinks*, to talk about my lack of assertiveness. So I called him to ask if my 4.97 indicates I am simply people-pleasing. He said my score displays my conscientiousness, one of the traits people find most desirable. “It’s the adult Boy Scout personality trait. You’re polite, kind, courteous,” he said. “The problem with conscientiousness is it sometimes gets in the way of assertiveness.” He said this in a way that was kind, helpful and totally compatible with a guy who is just a 4.91.

I realize that sometimes, if I need to make a phone call or suggest an alternate route, I may have to risk getting a 4. But most of the time, I’m going to suggest that Cassandra and I get separate cars and meet up at home. □

Vicente Fox The former President of Mexico talks about his Twitter wars with Donald Trump, his disbelief of Hillary Clinton's trade talk and what makes the perfect cowboy boot

You tweeted to Donald Trump on your wife's birthday saying he doesn't understand love. What doesn't he get? I haven't heard from him any compassionate thinking, any opening of his heart, any love for anybody except him and his family.

You have also tweeted that Trump is a loser, a lunatic, and that he is not welcome in Cancún. Are these things that a former head of state can only say on Twitter? It's key and crucial to speak the truth, to communicate the truth. And I speak the way I feel, the way I perceive, the way I think. Donald, his aggressiveness, has come to the world's attention. For us in Mexico we consider him an absolute danger.

After you apologized for offending Trump, he said, "I accept his apology" and "We're going to have a great relationship with Mexico." Is he right? I said one way to go is to fight him, to oppose him. The other one is my compassionate side, my commitment to a dialogue. Accepting an apology is one of the best values a human being can have. So I said let me try this approach and see if we can deal with him in a different manner, but also to test him.

So he failed the test? Yes, of course. He has failed all along. He came like the bad guy, like the street fighter, like the gang member, to break everybody who stands in front of him. This nation is so great, so powerful, it's such a leader. Why can Trump tell people that he's going to make America great? That poor guy with such poor thinking, how can he make America great?

Tell me something nice about Trump. Is there anything you admire? Unfortunately not. Not even his hair.

Hillary Clinton has also been critical of free trade and has said NAFTA has "hurt a lot of American workers." Is she right? I am sure she doesn't believe that. I am sure she's for trade. This

is what has made America great. She's been moved to the corner because she wants to keep the center electorate.

You are modeling your presidential library after Bill Clinton's. Why him? He is a champion around the world. He's done more for the world than any individual person in relation to poverty, in relation to nutrition, in relation to health. It's incredible that they're being attacked, but I know the [Clinton] Foundation. I know how great it is.

You have said you are for legalizing all drugs because government should not be controlling people's lives. Are you concerned about the message that would send to kids? I can tell you that the formula works. You avoid criminals and violence, you refuse their mode of money that nourishes the cartels. That is a great solution to the violence problem. In relation to the health problem, I have not ever heard of anybody dying from an overdose of marijuana.

"Trump came like the bad guy, like the street fighter, like the gang member, to break everybody who stands in front of him."

Mexican President Enrique Peña Nieto and his wife bought expensive homes from a major government contractor. Do you think what he did was O.K.?

It could have been O.K. because it was supposed to be a purchase made by his wife. What they have managed poorly is to explain what happened there [and] to put the information with transparency in front of public opinion. And now he's got that mark for the rest of his life.

What's the most exotic animal skin you have cowboy boots made out of? I like regular leather. I like that much better than the fancy exotic leathers. They have a great softness for your feet.

—TESSA BERENSON



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